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Result
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
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                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /SIDS6/gcgdata/geneseq/geneseqp/AA1980.DAT:*

2: /SIDS6/gcgdata/geneseq/geneseqp/AA1981.DAT:*

3: /SIDS6/gcgdata/geneseq/geneseqp/AA1982.DAT:*

4: /SIDS6/gcgdata/geneseq/geneseqp/AA1983.DAT:*

5: /SIDS6/gcgdata/geneseq/geneseqp/AA1984.DAT:*

6: /SIDS6/gcgdata/geneseq/geneseqp/AA1985.DAT:*

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7: /SIDS6/gcgdata/geneseq/geneseqp/AA1987.DAT:*

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13: /SIDS6/gcgdata/geneseq/geneseqp/AA1994.DAT:*

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length: 2000000000
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Gapop 10.0 , Gapext 0.5
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1.995 Million cell updates/sec
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Y79114
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Peptide antagonist
Peptide antagonist
Peptide antagonist
Peptide antagonist
Prottein able to bi
Arabidopsis thalia
Arabidopsis thalia
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33 78.6 207 18 W14160 33 78.6 207 20 Y02291 34 76.2 8 21 Y79112 35 76.2 77 21 B54158 36 76.2 238 19 W82389 37 76.2 242 19 W82399 38 19	.44	43	12	41		39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	
8.6 207 18 W14160 R. rhodo 8.6 207 20 Y02291 Phuman pub 6.2 77 21 B54158 Human pub 6.2 238 19 W82389 Plea sal 6.2 264 19 W82392 Plea sal 6.2 264 19 W82390 Plea sal 6.2 264 19 W82390 Plea sal 6.3 117 18 W09067 Banana b 3.8 117 18 W09067 Banana b 3.8 1516 22 H1435 C. albic 3.8 1516 22 W16099 Accetobac 4.4 8 20 Y16099 Accetobac 4.4 8 21 Y79113 Peptide 4.4 116 16 R65349 Human im 6.4 116 16 R65349 Human im 6.5 20 B44993 Human MU 6.4 240 22 B45994 Human MU 6.4 240 22 B45994 Human MU 6.4 240 22 B45994 Human MU 6.4 240 22 B45996 Human MU 6.4 240 22 B45996 Human MU 6.4 240 22 B45998 Human MU 6.4 240 22 B45998 Human MU 6.4 240 22 B45998 Human MU 6.4 240 22 B45999 Human MU 6.4 240 22 B46000 Human M	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	31	31	31	31	31	31	32	32	32	32	32	ω W	ω ω	
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n do	44	4	46	B46000	в45999	B45998	B45997	в45996	в45995	B45994	B45993	B45992	B45991	B44423	Y29528	в32388	R66349	Y79126	Y79113	Y16868	Y16099	B11435	R84082	Y35682	W09070	W09067	W82390	W82392	W82389	в54158	Y79112	Y02291	W14160	
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (UYMA-) UNIV MARYLAND BALTIMORE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-1998;
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Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic;

05-JUN-2000 (first entry)

Y79116;

Y79116 standard; Peptide;

8 AA

Peptide antagonist of zonulin.

Peptide antagonist Eucalyptus grandis Nitrile hydratase

New peptide antagonist of zonulin useful as antiinflammatory agent for

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RESULT
Y79114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This present sequence is that of a peptide antagonist of zonulin CC (2), one of 25 such peptides (see Y79105-29) of the invention, CC which bind to a zonula occludens toxin (ZOT) receptor, yet do not CC (TI). The peptide antagonists are based on a common motif of zor cc and human zonulins, which is believed to be critical for receptor CC and human zonulins, which is believed to be critical for receptor CC antinflammatory agents in the treatment of gastrointestinal confilmmation, where they bind to the zor receptor in the intestine CC antisflammation, where they bind to the zor receptor in the intestine CC intestine. Gastrointestinal inflammation conditions give rise to treatment intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, c.g. clostridium difficile infection, anterocolitis, shigellosis, viral gastroenteritis, parasite mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, CC collagenous colitis, inflammatory bowel disease, diseases with collisis colitis, inflammatory bowel disease, diseases with collisis colitis, inflammatory bowel disease, diseases marked by carection of congenital heart disease with Fontan's operation, c.g. securities, and after surgical correction of congenital heart disease with Fontan's operation, c.g. securities, and immune disease, c.g. e.g. systemic lupus erythematosus or food allergies, primarily to mucosal disease, essinophilic gastroenteritis, and immune disease, c.g. e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
(UYMA-) UNIV MARYLAND BALTIMORE.
                                               03-AUG-1998;
                                                                                        28-JUL-1999;
                                                                                                                                                                           W0200007609-A1
                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                          neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                          Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                        Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Y79114 standard; Peptide; 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating cerebral ischemia, stroke, shigellosis, viral gastroenteritis,
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8; Conserv
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                                         98US-0127815.
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Pred. No. 3.2e+05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 meningitis, encephalomyelitis
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17-FEB-2000

28-JUL-1999;

99WO-US16683

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RESULT
Y79115
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Best Local Similarity
""" (Conserved)
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                                                                                                                                         Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antitylral; antibacterial; cytostatio; anti-HTV; vulnerary; antiller; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                         WO200007609-A1
                                                                                                                                                                                                                                                                                                 Peptide antagonist of zonulin.
                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                  05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                            Y79115;
                                                                                                                                                                                                                                                                                                                                                                                                                           Y79115 standard; Peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 44; 69pp; English.
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                                                                                                                                                                                                                                                                                                                                           (first entry)
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87.5%;
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Pred. No. 3.2e+05;
                                                                                                                                                                  -HIV; vulnerary; antiallergic;
antiparasitic; vasotropic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 7; Conser
                                                  Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TI). The peptide antagonists are based on a common motif of 207 and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the 207 receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whisple's disease, diseases with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis .
                                                                                                                                                                                                                                05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y9105-29) of the invention, which bind to a zonula occludens toxin (20T) receptor, yet do not physiologically modulate the opening of mammalian tight junction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 44; 69pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-205565/18
                                                                                                                                                                                        Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                        Y79128 standard; Peptide; 8 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (UYMA-) UNIV MARYLAND BALTIMORE
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                                                                                                                                                                                                                                                                                                                                                                                                      grglvqpg
                                                                                                                                                                                                                                                                                                                                                                                                                                          GRGLVQDG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0127815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        erythematosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83.3%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or food
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      allergies, primarily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             yet do not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             junctions
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ind human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of crecombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the 207 receptor in the intestine cand yet does not physiologically modulate the opening of TV in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, e.g. clostridium difficile infection, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, parasite collagenous colitis, inflammatory bowel disease, diseases marked by imphatic obstruction, e.g. congenital intestinal lymphanglectasia, carcoidosis lymphoma, mesenteric tuberculosis, and after surgical corrections of concential heart disease with Fontan's operation,
                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                17-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor
                               Human Immunodeficiency Virus
                                                 Antibodies;
                                                                                Protein able
                                                                                                                                                   R40924;
                                                                                                                                                                                 R40924
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                which bind to a zonula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 48; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fasano
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                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                   Similarity 7; Conserv
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                                               antigen binding proteins; library;
                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                               to bind to HIV-1 tat protein.
                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
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                                                                                                                                                                                 Protein; 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ce is that of a peptide antagonist of zonul peptides (see Y79105-29) of the invention,
                                                                                                                                                                                                                                                                                                                                                       83.3%;
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Pred. No. 3.2e
0; Mismatches
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RESULT
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Best Local Similarity 87.5
Matches 7; Conservative
                                    25-FEB-1999,
05-MAR-1999,
09-MAR-1999,
23-MAR-1999,
25-MAR-1999,
25-MAR-1999,
01-APR-1999,
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                                                                                                                                                                                                                                                         EP1033405-A2
                                                                                                                                                                                                                                                                                        Arabidopsis thaliana.
                                                                                                                                                                                                                                                                                                                 Protein identification; signal transduction pathway; metabolic hybridisation assay; genetic mapping; gene expression control; termination sequence.
                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana protein fragment SEQ ID NO: 44549.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G36361 standard; Protein; 146 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G36361;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The synthetic gene encodes a protein corresponding to an antibody capable of binding to a specific antigen, in this case the HIV-1 tat protein. Many synthetic genes are synthesised, each containing a the heavy and light chains of antibody and undetermined nucleotide region encoding the framework regions of regions which are random sequences. The genes are then used in the construction of vectors which are subsequently used to transform microbes. The proteins thus produced are screened for binding activity to the specific antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antigen-binding proteins and corresp. synthetic genes - are constructed synthetically and used to make antibody library, disease diagnosis, etc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim.13; Page 22; 40pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1993-274375/35.
N-PSDB; Q48605.
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8 grglvqpg 15
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                               99US-0121825
99US-0123180
99US-0123548
99US-0125788
99US-0125788
99US-0126264
99US-0126785
99US-0127462
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87.5%;
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Pred. No. 34;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                             pathway; promoter;
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           23-JUN-1999
24-JUN-1999
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29-JUN-1999
30-JUN-1999
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01-JUL-1999
02-JUL-1999
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07-JUL-1999
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30-APR-1999;
04-MAY-1999;
05-MAY-1999;
06-MAY-1999;
07-MAY-1999;
11-MAY-1999;
14-MAY-1999;
18-MAY-1999;
21-MAY-1999;
21-JUN-1999;
01-JUN-1999;
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08-APR-1999;
990S-0137528

990S-0137502

990S-0137724

990S-013804

990S-0138847

990S-0139452

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990S-0144331
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RESULT
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                                                                                                                                                                        Arabidopsis thaliana
                                                                                                                                                                                         Protein identification; signal transduction hybridisation assay; genetic mapping; gene etermination sequence.
                                                                                                                                                                                                                        Arabidopsis thaliana protein fragment
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99US-0121825

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expression control;
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promoter;
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This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (20T) receptor, yet do not (TJ). The peptide antagonists are based on a common motif of 20T binding. They can be prepared by chemical synthesis or by use of antinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the 20T receptor in the intestine and yet does not physiologically modulate the opening of TJ in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                    New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis -
                                                                                                                                                             Claim
                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                             Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                          Fasano
                                                                                                                                                                                                                                                                           (UYMA-) UNIV MARYLAND BALTIMORE
                                                                                                                                                                                                                                                                                                        03-AUG-1998;
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A79263 to A79736 and B25100 to B25570 represent polynucleotide and protein sequences isolated from eucalyptus (Eucalyptus grandis) or pir (Pinus radiata also known as Monterey pine). The protein sequences are involved in cell signalling. The polynucleotide and protein sequences can be used to modify the response of plant cells to external signals e.g. environmental changes or pathogens during the growth and developm of a plant. They can be used to modify cell proliferation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal disease, without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, eosinophilic gastroenteritis, and immune diseases, eng. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                          Isolated polynucleotide encoding a polypeptide involved in cell signaling used for generating transgenic plants with modified r to external signals -
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01-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eucalyptus grandis; Pinus radiata;
plant cell signalling; modulation;
environmental change; development;
elongation; survival; disease resis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropal caused by infection, e.g. Clostridium difficile infection,
                                                                                                                                                                                                            Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENESIS
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99US-0162866
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87.5%;
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3.2e+05;
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Best Local
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                                   sp. N-774 and Rhodococcus rhodochrous J-I.

Plasmid pYUKI21 contg. nitrile hydratase gene derived from Rhodococcus sp. N-774 is prepd. from a JM105/pYUKI21 culture. pYUKI21 DNA is digested with SphI and Sali. This fragment contains the nitrile hydratase gene which is radiolabelled for use as probe. The NH gene encodes an alpha subunit as represented here, and a beta subunit represented in R13898.
                                                                                                                          A DNA probe is prepd. from JM105/pYUK121 (FERM BP-1937) described in JP-A-2-119778/1990 due to the high degree of homology in the amino ac sequence between the nitrile hydratase beta subunit of Rhodococcus
                                                                                                                                                                                                                      DNA encoding two types rhodochrous J-I, used t
                                                                                                                                                                                                                                                           WPI; 1991-268533/37.
N-PSDB; Q13618.
                        See also
                                                                                                                                                                                Disclosure; Page 20-23;
                                                                                                                                                                                                                                                                                                                           (NITT ) NITTO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nitrile hydratase alpha subunit.
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nes 6; Conserv
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Best Local Similarity
""" 6; Conserve
                                                                                                                                                                                                                              This is the amino acid sequence of the nitrile hydratase alpha subunit from Rhodococcus rhodochrous strain IFO15564. The coding sequences were took by screening a genomic R. rhodochrous DNA library in EMBL3 amplified a 0.7 kb fragment of the amidase gene. The library screen isolated a phage containing a 15 kb insert. When analysed, the insert containing a napprox. 6 kb Sacl-EcoRI fragment (see T62387) nitrile hydratase alpha and beta subunits and another open reading frames for the amidase gene (762385), the encoding a 399 amino acid protein (W14162) of unknown function. The enzymes, prepared by genetic engineering methods, can be used in the industrial production of useful compounds.
                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rhodococcus rhodochrous nitrile hydratase and amidase genes useful for the industrial preparation of useful cpds.
32 gkglvpdg
                                                                                                 Local Similarity
les 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enzyme; genetic engineering.
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                                               1 GRGLVQDG 8
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                                                                                                                                                                                                                 207
                                                                                            Conservative
    39
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                                                                                                                78.6%;
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75.0%;
                                                                               Score 33; DB Pred. No. 68; 1; Mismatches
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Pred. No.
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Mismatches
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68;
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Best Local S
Matches 6
         Zonulin;
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RESULT

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r02291
ID Y02291 standard; protein; 207 AA
AC Y02291;
XX
DT 14-JUL-1999 (first entry)
DE Alpha chain of a Brevibacteriu
XX
DT 14-JUL-1999 (first entry)
DE Alpha chain of a Brevibacteriu
XX
WHalogenated benzamide; enzymatic
KW beta chain; strain R312; mutant
XX
Halogenated benzamide; enzymatic
KW beta chain; strain R312; mutant
XX
FR 24-OCT-1997; 97FR-0013368.
PR 2770214-A1.
XX
PD 30-APR-1999.
XX
PP 24-OCT-1997; 97FR-0013368.
PR 24-OCT-1997; 97FR-013368.
PR 24-OCT-1997; 97FR-0013368.
PR 24-OCT-1997; 97FR
                                Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antialer, hypotensive; immunosuppressive; antiparasitic; vasotropic gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                        Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                     Y79112 standard; Peptide; 8 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The specification describes the production of halogenated benzamides by enzymatic hydrolysis of halogenated benzonitriles using a Brevibacterium nitrile hydratase. This enzyme is a tetrameric enzyme comprising 2 alpha and 2 beta chains. The present sequence represents is derived (strain R312 or its mutant A4) have higher activity for hydrolysing halogenated benzonitriles than for hydrolysing benzonitrile. The method is especially for preparing 2,6-difluorobenzamide, which is an intermediate for insecticides, especially diflubenzuron.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Halogenated benzamide production - by halogenated benzonitrile hydrolysis with Brevibacterium nitrile hydratase enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     32 gkglvpdg 39
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alpha chain of a a Brevibacterium nitrile
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Pred. No.
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68;
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RESULT 15
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Best Local Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of crecombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the cintestine. Gastrointestinal inflammation conditions give rise to increased intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, creating intestinal overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. systemicis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases with mucosal erosion or ulcerations, e.g. systemial lymphangicetasia, correction of congenital heart disease with Fontan's operation, collagenous diseases without ulceration, e.g. Menertier's disease, collagenses without ulceration, e.g. Menertier's disease, collagenses, eosinophilic gastroenteritis, and immune diseases, collaise disease, eosinophilic gastroenteritis, and immune diseases, collaise.
Human; pancreas; pancreatic cancer; pancreatic cancer antigen;
                                                                        09-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 43; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-FEB-2000
                                  Human pancreatic cancer antigen protein sequence SEQ ID NO:610.
                                                                                                                                           B54158 standard;
                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
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partners to the proteins and the activity of the proteins can be identified. The pancreatic cancer antigens can be used to detect, treat or prevent pancreatic disorders, especially cancer. Agonists and antagonists to the antigens can be screened for. The pancreatic cancer antigen polynucleotides can be used to design nucleic acid hybridisation probes that can be used in chromosome mapping, linkage analysis, tissue identification and/or typing and a variety of forensic and diagnostic methods. The proteins can be used to generate antibodies which are used to purify, detect and target the polypeptides, including both in vivo and in vitro diagnostic and therapeutic methods. The proteins can be used to treat or prevent neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal or proliferative disorders. C99232 to C99240 and B54467 represent sequences used in the exemplification of the present intention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     called pancreatic cancer antigens, given in B54008 to B54466. The human pancreatic cancer antigens have cytostatic, neuroprotective, nootropic, immunomodulatory, relaxant, contraceptive, gynaecological, cardiant and antiinflammatory activities, and can be used in gene therapy. The polynucleotide and proteins can be used for preventing, treating, or ameliorating a medical condition or in assays for diagnosting a pathological condition or a susceptibility to one in a subject. Binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     detection; diagnosis; identification; cytostatic; neuroprotective; nootropic; immunomodulatory; relaxant; contraceptive; gynaecologic antiinflammatory; cardiant; gene therapy; chromosome mapping; linkage analysis; tissue identification; tissue typing; forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid that is a pancreatic cancer antigen for preventing, treating, or ameliorating a medical condition, particular pancreatic cancer, or for use in assays for diagnosing a pathological condition
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exemplification of the
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present invention.
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373	370	369	369	366	363	361	285	277	268	262	216	1596	888	809	692
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A:Note: DKFZp547G1110.1

G:Superfamily: SH2 homology
C:Keywords: phosphoprotein
F:326-334/Region: proline-rich
F:326-334/Region: proline-rich
F:384-478/Domain: SH2 homology <SH2>
F:11,14.18/Binding site: phosphate (Ser) (covalent) #status predicted
F:296,351,481/Binding site: phosphate (Tyr) (covalent) #status predicted probable signaling mediator DKFZp547G1110.1 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 11-Jun-1999 #sequence\_revision 11-Jun-1999 #text\_chang A; Molecule type: mRNA A; Residues: 1-540 <POU> A; Cross-references: EMBL: AL049924 A; Reference number: Z16466 A; Accession: T08662 R; Poustka, A.; A; Experimental source: submitted to the Protein Sequence Database, May 1999 T08662 ;Genetics: Accession: T08662 Klein, M.; Mewes, H.W.; Gassenhuber, J.; Wiemann, fetal brain; clone DKFZp547G1110 11-Jun-1999 #text\_change 24-Nov-1999

?

Length 540

0

conserved hypothetical protein [imported] - Neurospora crassa N;Alternate names: protein 13E11.10 C;Species: Neurospora crassa C;Date: 05-May-2000 #sequence\_revision 05-May-2000 #text\_change 05-May-2000 C;Accession: T48753 R;Schulte, U; Aign, V; Hoheisel, J.; Brandt, P.; Fartmann, B.; Holland, R. submitted to the Protein Sequence Database, April 2000 A;Reference number: Z24341 A;Accession: T48753 RESULT T48753 Query Match
Best Local Similarity
Thes 7; Conserv A; Status: preliminary 1 GRGLVQDG 8 ||||| || 67 GRGLVSDG 74 N Conservative 88.1%; .. Score 37; DB Pred. No. 6.4; Mismatches Fartmann, B.; Holland, R.; Nyakatu ۲. Indels 0, Gaps

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A; Introns: 197/2
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A:Status: preliminary; not compared with conceptual translation A:Molecule type: mRNA A:Molecule type: mRNA A:Residues: 1-176 <ULM> A:Residues: 1-176 <ULM> A:Residues: 6B:M90504; NID:9170051; PIDN:AAA34005:1; PID:9170052 A:Note: sequence extracted from NCBI backbone (NCBIP:118227) C:Superfamily: DNA-directed RNA polymerase II RPB7 chain
                                                                                                                                                                                                                                                                     K;Ulmasov, T.; Guilfoyle, T.J.
J. Biol. Chem. 267, 23165-23169, 1992
A;Title: Sequence of the fifth largest subunit of RNA polymerase
A;Reference number: A44457; MUID:93054645
                                                                                                                                                                                                                                                                                                                                                   RESULT 4

B44457

RNA polymerase II fifth largest subunit - soybean

C:Species: Glycine max (soybean)

C:Date: 04-Sep-1998 #sequence_revision 04-Sep-1998 #text_change:
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A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-580 <RANN>
A;Residues: 1-580 <RANN>
A;Cross-references: EMBL:D64004; GB:AB001339; NID:g1001701; PIDN:BAA10612.1; PID:g100177
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, June 1996
C;Superfamily: Escherichia coli ABC transporter mdlA; ATP-binding cassette homology
F;356-548/Domain: ATP-binding cassette homology <ABC>
F;373-380/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                          R;Ulmasov,
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                                                                                              Query Match
Best Local
                                                                          Matches
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C;Species: Synechocystis sp.
A;Variety: PCC 6803
C;Date: 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change 20-Jun-2000
C;Accession: S76668
R;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; Miy
DNA Res. 3, 109-136, 1996
DNA Res. 3, 109-136, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession:
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A;Accession: S76668
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55 GKGLIRDG
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les 5; Conserv
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7; Conserv
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75.0%;
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Pred. No. 18;
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Yamada, M.; Yasuda
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В Š

Similarity

Score 34; Pred. No.

DB 74; 1.

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F;265-291/Domain: EGF homology <EG3>
F;265-291/Domain: EGF homology <EG3>
F;296-332/Domain: EGF homology <EG3>
F;324-405/Domain: EGF homology <EG4>
F;324-405/Domain: fibronectin type III repeat homology <FN1>
F;413-494/Domain: fibronectin type III repeat homology <FN3>
F;502-584/Domain: fibronectin type III repeat homology <FN3>
F;592-676/Domain: fibronectin type III repeat homology <FN3>
F;772-853/Domain: fibronectin type III repeat homology <FN5>
F;861-944/Domain: fibronectin type III repeat homology <FN6>
F;949-1027/Domain: fibronectin type III repeat homology <FN7>
F;1035-1115/Domain: fibronectin type III repeat homology <FN8>
F;1130-138/Domain: fibronectin type III repeat homology <FN8>
F;1130-138/Domain: fibronectin type III repeat homology <FN8>
F;1127-1286/Region: calcium binding #status predicted
F;53,197,277,391,469,580,734,790,960,1031,1041,1256,1342/Binding site: carbohydrate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: protein
A;Molecule type: protein
A;Rolecule type: protein
A;Residues: 579-586;827-840 <NOE1>
C;Comment: This protein is a neural extracellular matrix protein implicated in neural C;Superfamily; restrictin; EGF homology; fibrinogen beta/gamma homology; fibronectin C;Keywords: calcium binding; cell adhesion; duplication; extracellular matrix; glycop F;1-33/Domain: signal sequence #status predicted <SIG>
F;1-33/Domain: restrictin #status predicted <MAT>
        Query Match
Best Local S
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F;265-291/Domain: EGF homology <EG1>
F;265-291/Domain: EGF homology <EG2>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental source: brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neuron 8, 849-863, 1992
A;Title: The chicken neural extracellular matrix molecule restrictin: similarity with
A;Reference number: JH0675; MUID:92265298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Species: Gallus gallus (chicken)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: JH6675; PS0385; S23254
R;Noerenberg, U;; Wille, H.; Wolff, J.M.; Frank, R.; Rathjen, F.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Cross-references: GB: X64649;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-1353 <NOE>
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J. Biol. Chem. 267, 23165-23169, 1992
A;Title: Sequence of the fifth largest subunit of RNA polymerase
A;Reference number: A44457; MOID:93054645
A;Accession: A44457
A;Status: preliminary; not compared with conceptual translation
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A; Residues: 1-176 < ULM>
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81.0%;
75.0%;
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62.5%;
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Pred. No.
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G:Species Rhodococcus sp. C:Species Rhodococcus sp. C:Species Rhov-1998 #sequence_revision 21-Nov-1998 #text_change 15-Sep-2000 C:Date: 21-Nov-1998 #sequence_revision 21-Nov-1998 #text_change 15-Sep-2000 C:Accession: S04472; A:S0463; S16606; S02070; S54105; S62095; S15071; S28887 R;Ikehata, O.; Nishiyama, M.; Horinouchi, S.; Beppu, T. Bucchem. 181; 563-570, 1989 Eur. J. Biochem. 181; 563-570, 1989 A;Title: Primary structure of nitrile hydratase deduced from the nucleotide A;Reference number: S04471; MUID:89276338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Description: catalyzes the reaction of one molecule of water and an aliphatic nitrile C;Superfamily: nitrile hydratase alpha chain C;Keywords: carbon-oxygen lyase; hydro-lyase; iron; metalloprotein F;2-188/Product: nitrile hydratase alpha chain #status predicted <MAT> F;110,113,114,115/Binding site: nitrosyl iron (Cys, Cys, Ser, Cys) (shared with beta cha F;113/Modified site: cysteine sulfinic acid (Cys) #status predicted F;115/Modified site: cysteine sulfenic acid (Cys) #status predicted
                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-17, 'A, 19-207 <NIS>
A; Cross-references: EMBL:X14668
A; Endo, T.; Watanabe, I
FEBS Lett. 243, 61-64, 1989
                                                                                                                                                                                                                                                                R:Nishiyama, M.
submitted to the EMBL Data
A:Reference number: S16606
A:Accession: S16606
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J. Bacteriol. 172, 6764-6773, 1990
A;Title: Purification, cloning, and primary
A;Reference number: A37806; MUID:91072222
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A; Residues: 1-188 <MAY>
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                         A; Molecule type: protein A; Residues: 2-19, 'T' <EN
                                                                                           A; Title: Nitrile hydratase of Rhodococcus A; Reference number: S02070; MUID: 89153549
                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: protein
A; Residues: 2-19;47-66;144-159 <IKE2>
                                                                                                                                                                                                                                                                                                                                                                                                                   A; Accession: A30463
                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: EMBL:X14668; NID:g46429; PIDN:CAA32797.1; PID:g46430
A;Experimental source: strain N-774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: S04472
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R;Hashimoto, Y.; Nishiyama, M.; Ikehata, O.; Horinouchi, Blochim. Blophys. Acta 1088, 225-233, 1991
A;Title: Cloning and characterization of an amidase gene A;Reference number: S15070; MUID:91159474
A;Accession: S15071
                                                                                                                                                                                                                                                                                                                          nitrile hydratase (EC 4.2.1.84) alpha chain - Rhodococcus erythropolis C;Species: Rhodococcus erythropolis C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun C;Accession: JN0705
                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
JN0705
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A;Residues: 1-29;30,197-207 <HAS>
A;Cross-references: EMBL:X54074
A;Experimental source: strain N-774
R;Huang, W.; Schneider, G.; Lindqyist,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data Library, March A;Description: Cloning, sequencing of the A;Reference number: S54104
                                                                                                                                                                                                 A; Reference number: PN0570; MUID: 93379358 A; Accession: JN0705
                                                                                                                                                                                                                                              C; Accession: JN0705
R; Duran, R.; Nishiyama, M.; Horinouchi, S.; Beppu, Bioscl. Biotechnol. Biochem. 57, 1323-1328, 1993
A; Title: Characterization of nitrile hydratase gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Description: catalyzes the reaction of one molecule of water and an aliphatic C;Superfamily: nitrile hydratase alpha chain C;Keywords: carbon-oxygen lyase; hydro-lyase; iron; metalloprotein C;Keywords: carbon-oxygen lyase; hydro-lyase; iron; metalloprotein F;2-207/Product: nitrile hydratase alpha chain #status experimental <MAT> F;110,113,114,115/Binding site: nitrosyl iron (Cys, Cys, Ser, Cys) (shared with F;113/Modified site: cysteine sulfinic acid (Cys) #status experimental F;115/Modified site: cysteine sulfenic acid (Cys) #status experimental
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      submitted to the Brookhaven Protein Data Bank, A; Reference number: A73039; PDB:1AHJ
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A; Accession: S62095
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A; Experimental source:
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A; Residues: 1-207 <NI2>
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ce: strain JCM6823
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A.Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-126,'V',128-205,'S',207-378 <YOS>
A;Cross-references: EMBL:D89220; NID:91749647;
  A; Experimental source: strain C; Genetics:
                                                                                                                             A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-378 <ACDS
A;Residues: 1-378 <ACDS
A;Cross-references: EMBL:AL096874; PJDN:CAB51339.1; GSPDB:GN00067;
A;Experimental source: strain 972h-; cosmid c1539
R;Yoshioka, S.; Kato, K.; Nakai, K.; Okayama, H.; Nojima, H.
DNA Res. 4, 363-369, 1997
A;Title: Identification of open reading frames in Schizosaccharomyc A;Reference number: Z17323; MUID:98162722
A;Status.
                                                                                                                                                                                                                                                                                                                      alcohol dehydrogenase (EC 1.1.1.1) class III [similarity] - fission yeast (Schizosacchar N:Contains: formaldehyde dehydrogenase (glutathione) (EC 1.2.1.1)
C;Bpecies: Schizosaccharomyces pombe
C;Date: 03-Dec.1999 #sequence_revision 03-Dec.1999 #text_change 08-Dec.2000
R;Mc Dougall, R; Rajandream, M.A.; Barrell, B.G.; Seeger, K.; Quail, M.; Harris, D. submitted to the EMBL Data Library, July 1999
A;Accession: T39466
A;Status: translated from GB/EMBL/DDBJ
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A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-295 <STO>
A; Cross:references: GB:AP001516; GB:BA000004;
A; Cross:references: GB:AP001516; GB:BA000004;
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C; Genetics:
A; Gene: BH2720
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             K;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, F.; Hir. Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A83650; MUID:20263314
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C;Reywords: carbon-oxygen lyase; hydro-lyase; iron; metalloprotein
F;2-207/Product: nitrile hydratase alpha chain #status predicted <MATY
F;110,113,114,115/Binding site: nitrosyl iron (Cys, Cys, Ser, Cys) (shared with beta
F;113/Modified site: cysteine sulfanic acid (Cys) #status predicted
F;115/Modified site: cysteine sulfenic acid (Cys) #status predicted
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75.0%;
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Pred. No. 24;
0; Mismatches
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Pred. No. 17;
1; Mismatches
PIDN:BAA13881.1; PID:d1014578; PID:g17496
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Query Match

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Score

33; DB <u>ب</u>

Length

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A;Gene: ATSP:F21B
A;Map position: 1
                                                                                                                               submitted to the EMBL Data Library, January 1998 A; Reference number: Z14208
A; Accession: T00904
                                               A;Cross-references:
C;Genetics:
                                                                                              A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                             C:Accession: T00904
R;Shinn, P.; Buehler, E.; Dewar,
eologis, A.; Ecker, J.R.
                                                                                    A; Residues: 1-609 <SHI>
                                                                                                                                                                                                                                                  hypothetical protein F21B7.18 - Arabidopsis thaliana
C:Species: Arabidopsis thaliana (mouse-ear cress)
C:Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 22-Oct-1999
                                                                                                                                                                                                                                                                                                                                                             RESULT
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A; Residues: 1-482 <KLE>
A; Cross-references: GB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Superfamily: acetyl-CoA hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Title: The complete genome sequence of the hyperthermophilic, sulfate-reducing arch A;Reference number: A69250; MUID:98049343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; nucleic acid sequence not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; Do.; Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weldman, J.F.; McDonald, L. Nature 390, 364-370, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Klenk, H.P.; C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4-hydroxybutyrate CoA transferase (cat2-1) homolog - Archaeoglobus fulgidus C;Species: Archaeoglobus fulgidus C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 17-Mar-2000
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G;Superfamily: alcohol dehydrogenase; long-chain alcohol dehydrogenase homology
C;Keywords: alcohol metabolism; NAD; oxidoreductase; zinc
E;47,69,176/Binding site: zinc, catalytic (Cys, His, Cys) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Introns: 11/3; C; Function:
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A;Map position: 2
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Best Local Similarity 75.0
"Thes 6; Conservative
                      ATSP:F21B7.18
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                                     EMBL:AC002560; NID:g2618677; PID:g2809249; GSPDB:GN00059; ATSP:F2
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75.0%;
                                                                                                                                                                                                                     K.; Feng, J.; Kim, C.;
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                                                                                                                                                              thaliana BAC F21B7
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tegument protein 64 - equine herpesvirus 2
C;Species: equine herpesvirus 2
C;Date: 27-Oct-1995 #sequence_revision 03-Nov-1995 #text_change 08-Oct-1999
C;Accession: S55659
R;Telford, E.A.R.; Watson, M.S.; Aird, H.C.; Perry, J.; Davison, A.J.
J. Mol. Biol. 249, 520-528, 1995
A;Title: The DNA sequence of equine herpesvirus 2.
A;Title: The DNA sequence of of equine herpesvirus 2.
A;Reference number: S55594; MUID:95302501
A;Accession: S55659
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
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S55659
Search completed: June 13, 2001, 14:10:44 Job time: 145 sec
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                                                                                                                                                                                                                                                                                                                                           C; Superfamily: Escherichia coli methionyl aminopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; Takahawa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; K DNA Res. 6, 83-101, 1999
A;Tille: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyr A;Reference number: A72450; MUID:99310339
A;Accession: C72712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                probable methionine aminopeptidase APE1114 - Aeropyrum pernix (strain K1) C;Species: Aeropyrum pernix C;Decies: Aeropyrum pernix C:Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Jun-2000 C;Accession: C72712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;MOLECULE type: DNA
A;ResIdues: 1-3436 <TEL>
A;Cross-references: GB:U20824; NID:g695172; PIDN:AAC13852.1; PID:g695237
A;Cross-references: GB:U20824; NID:g695172; PIDN:AAC13852.1; PID:g695237
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, February 1995
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                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: DDBJ:AP000060; NID:g5104188; PIDN:BAA80099.1; PID:g5104784
A;Experimental source: strain Kl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Residues: 1-281 <KAW>
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Best Local Similarity 62.3
""" hohes 5; Conservative
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Best Local Similarity 75.0
Matches 6; Conservative
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1048 GRGSVEDG 1055
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258 GKGLVPDG 265
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Pred. No. 3.2e+02;
1; Mismatches 1
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Maximum Match 100%
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GRGLVQDG 8 GKGLIRDG 62

Glycine max (Soybean)

Best Local Similarity Matches 5; Conserv

62.5%;

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RPBT_SOYBN
STANDARD; PRT; 176 AA.
P46279;
01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
DNA-DIRECTED RNA POLYMERASE II 19 KDA POLYPEPTIDE
(RNA POLYMERASE II SUBUNIT 5).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

MEDLINE=93054645; PubMed=1429663;
Ulmasov T.N., Guilfoyle T.J.;

"Sequence of the fifth largest subunit of RNA polymerase II
Plants.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids I; Fabales; Fabaceae; Papilionoideae; Glycine.
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SUBCELLULAR LOCATION: NUCLEAR.

MISCELLANEOUS: THREE DISTINCT ZINC-CONTAINING RNA POLYMERASES A FOUND IN EUKARYOTIC NUCLEI: POLYMERASE I FOR THE RIBOSOMAL RNA PRECURSOR, POLYMERASE II FOR THE MRNA PRECURSOR, AND POLYMERASE
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CATALYTIC ACTIVITY: N NUCLEOSIDE TRIPHOSPHATE = N PYROPHOSPHATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIGN. Chem. 267:23165-23169(1992).
FUNCTION: DNA-DEFENDENT RNA POLYMERASE CATALYZES THE TRANSCRIPTION
OF DNA INTO RNA USING THE FOUR RIBONUCLEOSIDE TRIPHOSPHATES AS
                                    (Rel. 13, Created)
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                              -I- FUNCTION: NHASE CATALYZES THE HYDRATION OF VARIOUS NITH COMPOUNDS TO THE CORRESPONDING AMIDES. INDUSTRIAL PRODICE ACRYLAMIDE IS NOW BEING DEVELOPED USING SOME OF THESE IS CATALYTIC ACTIVITY: AN ALIPHATIC AMIDE - A NITRILE + HOUSE COFACTOR: BINDS A NON-HEME IRON.

-I- SUBUNIT: HETERODIMER OF AN ALPHA AND A BETA-CHAIN.
-I- SIMILARITY: TO OTHER NITRILE HYDRATASES SUBUNIT ALPHA.
 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                        Huang W., Jia J., Cummings J., Nelson M., "Crystal structure of nitrile hydratase rein a novel fold.";
                                                                                                                                                                                                                                                                                                                                            MEDLINE-97341231;
                                                                                                                                                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (2.65 ANGSTROMS)
                                                                                                                                                                                                                                                                                                                                                                                                                 "Nitrile hydratase of Rhodococcus acid sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mayaux J.-F., Cerbelaud E., Soubrier F., Faucher D., P. Purification, cloning, and primary structure of an enantiomer-selective amidase from Brevibacterium sp. structural evidence for genetic coupling with nitrile J. Bacteriol. 172:6764-6773(1990).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 1-187 FROM N.A.
STRAIN-BREVIBACTERIUM SP. / STRAIN R312;
MEDLINE-91072222; Pubmed-2254253;
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Hashimoto Y., Nishiyama M., Ikehata O., Horinouchi S., "Cloning and characterization of an amidase gene from page time in the species N-774 and its expression in Escherichia coli.", Biochim. Biophys. Acta 1088:225-233(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bigey F., Chebrou H., An Submitted (MAR-1995) to
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Bigey F., C
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sequence of a Rhodococcus
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STRAIN-N-774;
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Bacteria, Firmicutes; Actinobacteria;
Actinomycetales; Corynebacterineae; No
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15-JUL-1999 (Rel.
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EMBL/GenBank/DDBJ
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Query Match Best Local S Matches 5

Similarity 5; Conser

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InterPro; IPRO Pfam; PF00575;

Transferase; Nuclear prote

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15-JUL-1998 (Rel. 36, Last sequence update)
01-CCT-2000 (Rel. 40, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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3L; X54074; CAA38010.1;

3L; X48769; CAA88685.1;

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           s SWISS-PROT entry is copyright. It is produced through a collat ween the Swiss Institute of Bioinformatics and the EMBL outst European Bioinformatics Institute. There are no restrictions by non-profit institutions as long as its content is in
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SUBUNIT: COMPLEX OF TWO DIFFERENT
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Pred. No. 12;
1; Mismatches
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-> T (IN REF. 4).
19C16FA01663E002 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                            311
                                                                                SUBUNITS (POTENTIAL).
ALPHA/BETA/DELTA SUBUNITS
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12;
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Usage
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PROBABLE ZINC METALLOPEPTIDASE ZINC (CATALYTIC) (BY SIMILARITY BY SIMILARITY. ZINC (CATALYTIC) (BY SIMILARITY ZINC (CATALYTIC) (PROBABLE).

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SIMILARITY).

C17A5.04C

Hydrolase; SIGNAL

Metalloprotease;

Zinc;

Metal-binding; Signal.

POTENTIAL.

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RESULT
YE94_SO
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Best Local S
Matches 5
                                                                                    InterPro; IPRO00130; -.
InterPro; IPRO01590; -.
InterPro; IPRO01762; -.
InterPro; IPRO01762; -.
Pfam; PF01421; Reprolysin; 1.
Pfam; PF00200; disintegrin; 1.
PROSITE; PS00215; ADAM_MEPRO; 1.
PROSITE; PS00214; DISINTEGRIN_2; IALSE_NEG.
PROSITE; PS00214; DISINTEGRIN_2; FALSE_NEG.
PROSITE; PS00142; ZINC_PROTEASE; FALSE_NEG.
                                                                                                                                                                                                                                                                modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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013766;
                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
-1- COFACTOR: BINDS ONE ZINC ION (BY SIMILARITY)
-1- SUBCELLULAR LOCATION: THREFORE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Devlin K., Churcher C.M., Barrell B.G., Rajandream M.A., Wood V Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: MAY ACT AS AN ATP-DEPENDENT ZINC METALLOPEPTIDASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AE000939; AAB86338.1;
InterPro; IPR000649; -.
Pfam; PF01008; IF-2B; 1.
                                                                                                                                                                                                                            EMBL; Z98849; CAB11504.1; HSSP; P18619; 1FVL.
                                                                                                                                                                                                                                                                                                           use
                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-972;
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Eukaryota; Fungi; Ascomycota; Schizosaccharomycetes;
Schizosaccharomycetales; Schizosaccharomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROBABLE ZINC SPAC17A5.04C.
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15-JUL-1998 (Rel.
30-MAY-2000 (Rel.
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                                                                                                                                                                                                              MEROPS; M12.180;
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                                                                                                                                                                                                                                                                                                                                                                           SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (POTENTIAL)
SIMILARITY: BELONGS TO PEPTIDASE FAMILY MIZE (ZINC
METALLOPROTEASE); ALSO KNOWN AS THE REPROLYSIN SUBFAMILY.
SIMILARITY: CONTAINS 1 DISINTEGRIN-LIKE DOMAIN.
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5; Conser
                                                                                                                                                                                                                                                                                                           non-profit institutions as long
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Rel. 39, Last annotation update)
METALLOPEPTIDASE C17A5.04C PRECURSOR (EC
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36,
36,
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n; Initiation factor; Protein
33871 MW; 797777EEE6E321AF (
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62.5%;
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CRC64;
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SQ

SEQUENCE

512

AA,

56439 MW;

804BDA2333621DAB CRC64;

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RT MATTENSII Spring),";
RL Photochem. Photobiol. 56:751-758(1992).
CC -1-FUNCTION: REGULATORY PHOTORECEPTOR WHICH EXISTS IN TWO FORMS THAT CREATED TO THE PRESENT OF THE SMALL SUBURIT OF RIBULOSE-PROTOCHLOROPHYLLIDE REDUCTASE, RRNA, ETC. IT ALSO CONTROLS.
CC THE EXPRESSION OF ITS OWN GENE(S) IN A NEGATIVE FEEDBACK FASHION.
CC -1- SUBURIT: HOMODIMER.
CC -1- SUBURIT: HOMODIMER.
CC -1- STMILARITY: BELONGS TO THE PHYTOCHROME FAMILY.
                          PIR: $31280; $31280.

InterPro: IPRO00014; -.

InterPro: IPRO00410; -.

InterPro: IPRO00410; -.

InterPro: IPRO03018; -.

Pfam; PF01590; GAF; 1.

Pfam; PF00989; PAS; 2.

Pfam; PF00980; phytochrome; 1.

Pfam; PF00512; Signal; 1.

PFANT'S; PR01033; PHYTOCHROME.

PROSITE: PS00245; PHYTOCHROME.

PROSITE: PS00046; PHYTOCHROME.

R PROSITE: PS00046; PHYTOCHROME.
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Best Local S
Matches 5
                                                                                                                                                                    EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanelt S., Braun B., Marx S., "Phytochrome evolution: a physequence of phytochrome from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. STRAIN-SPRING;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Selaginella martensii (Martens's spike moss).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Lycopodiophyta;
Isoetopsida; Selaginellales; Selaginellaceae; Selaginella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHY1_SELMA
Q01549;
01-JUL-1993
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                                                                                                                                                               X61458; CAA43698.1;
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5; Conserv
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(Rel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=1475321;
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26,
38,
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on: a phylogenetic tree with the first complete
ome from a cryptogamic plant (Selaginella
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      76.2%;
62.5%;
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Last annotation updat
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             Photoreceptor; Phytochrome; Chromophore;
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RESULT
SYO_YEAST
ID SYO_YEAST
P13188; Q7
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                         BINDING
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                   HSSP; P00962; 1QRU
SGD; S0005694; GLN4
InterPro; IPR000924;
InterPro; IPR001412;
                                                                        (nterPro; lrvvv-1..., proved of the proved o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW use by non-profit institutions as long as its content entities requires a license agreement (See http://www.isb-scoresedisb-sib.ch).
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Medania A., Poch O., Tarassov I.A., Winsor B., Martin R.P.;
"Analysis of a 22,956 bp region on the right arm of Saccharomyces cerevisiae chromosome XV.",
reast 12:1563-1573(1996)
-i- CATALYTIC ACTIVITY: ATP + L-GLUTAMINE + TRNA(GLN) - AMP +
-YROPHOSHATE + L-GLUTAMINIL-TRNA(GLN).
-I- SIMILARITY: BELONGS TO CLASS-I AMINOACYL-TRNA SYNTHETASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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Saccharomyces cerevisiae (Baker's yeast).
Eukaryota, Fungi, Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetaccae; Saccharomyces.
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01-JAN-1990 (Rel. 13, Created)
01-NOV-1997 (Rel. 35, Last sequence up
01-CCT-2000 (Rel. 40, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GLUTAMINYL-TRNA SYNTHETASE
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SEQUENCE
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               MW;
                               "KMSKS" REGION.
ATP (BY SIMILARITY).
G -> Q (IN REF. 1).
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STRAIN=K12 / MG1655;
MEDLINE=94316500; PubMed=8041620;
Sofia H.J., Burland V., Daniels D.L., Plunke f Sofia H.J., Burland V., Daniels D.L., Plunke region from 76.0 to 81.5 minutes.";
T region from 76.0 to 81.5 minutes.";
Nucleic Acids Res. 22:2576-2586(1994).
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SEQUENCE
                                                                Pfam; PF00535; Glycos_transf_2; 1.

Pfam; PF00535; Glycos_transf_2; 1.

Pypothetical protein; Cellulose biosynthesis; Transferase; Glycosyltransferase; Transmembrane; Inner membrane.

TRANSMEM 50 70 POTENTIAL.

TRANSMEM 365 365 POTENTIAL.

TRANSMEM 367 367 POTENTIAL.

TRANSMEM 367 369 POTENTIAL.

TRANSMEM 412 432 POTENTIAL.

TRANSMEM 412 432 POTENTIAL.
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MEDLIND-97426617; PubMed-9278503;

Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
                                                                                                                                                                                                                                                                                                                    EMBL; U00039; AAB18510.1; ALT_FRAME. EMBL; U00039; CAB34650.1; ALT_FRAME. EMBL; AE000430; AAC76558.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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2; Mismatches
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W; C32E169E7E1DCC4F CRC64;
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O98462;

O98462;

30-MAY-2000 (Rel. 39, Created)

30-MAY-2000 (Rel. 39, Last sequence update)

O1-OCT-2000 (Rel. 40, Last annotation update)

DNA-DIRECTED RNA POLYMERASE ALPHA CHAIN (EC 2
 KPT2_ARCFU
028719;
01-OCT-2000
01-OCT-2000
01-OCT-2000
01-OCT-2000
PROBABLE RNA
KPTA2 OR AF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lee J., Manhart J.R.;

"Chloroplast rp123 gene cluster of Spirogyra maxima (Charophyceae),
shared by land plants.";

Submitted (FEB-1988) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: DNA-DEPENDENT RNA POLYMERASE CATALYZES THE TRANSCRIPTION
OF DNA INTO RNA USING THE FOUR RIBONUCLEOSIDE TRIPHOSPHATES AS
                                                                                                                                                                                                                                                                  HSSP; P005/4; According to the Prof. IPRO01700; -. Pfam; PF01000; RNA_pol_A_bac; Transferase; DNA-directed RNA 38837 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a continuous the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
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                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and foentities requires a license agreement (see http://www.isb-sib.or send an email to license@isb-sib.ch).
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| 433 GLVQDG 438
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CATALYTIC ACTIVITY:
RNA(N).
                                                                                                                                                                                                      Similarity 7; Conserv
0000 (Rel. 40, Created)
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RNA 2'-PHOSPHOTRANSFERASE 2 (EC 2.)
AF1553.
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2B52Bfr90446CB0E CRC64;
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Matches 5
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Bacteria; Firmicutes; Bac Bacillus/Staphylococcus ç
NCBI_TaxID=1423;
          MEDLINE=96051385; PubMed=7584024;
Ogasawara N., Nakai S., Yoshikawa
"Systematic sequencing of the 180
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01-OCT-1994
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Transferase;
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Nature 390:364-370(1997).

-I FUNCTION: REMOVES THE 2'-PHOSPHATE FROM RNA VIA AN INTERMEDIATE IN WHICH THE PHOSPHATE IS ADP-RIBOSYLATED BY NAD FOLLOWED BY A PRESUMED TRANSESTERIFICATION TO RELEASE THE RNA AND GENERATE ADP-RIBOSYLASE (BY SIMILARITY).

RIBOSYLASE (BY SIMILARITY).

-I-SIMILARITY: BELONGS TO THE KPTA / TPT1 FAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 RGLVQDG
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Archaea; Eurya
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PF01885; DUF60;
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5; Conserv
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4 (Rel. 30, Last sequ
5 (Rel. 31, Last anno
AL 30.1 KDA PROTEIN I
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Euryarchaeota; Archaeoglobales; Archaeoglobaceae;
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us group; Bacillus.
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71.48;
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Last annotation update)
PROTEIN IN COTF-TETB INTERGENIC REGION.
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kilobase region
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Best Local (
                                                         EMBL; X70183; CAA49732.1; PIR; S29976; S29976.
                                                                                                                                                                                                                                       REVISIONS.
STRAIN-H16,
Eitinger T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                 InterPro;
                                                                                                                                                                         Submitted (NOV-1994) to the EMBL/GenBank/DDBJ databases I- FUNCTION: COULD BE INVOLVED IN NICKEL BINDING AND ACT SIMILARITY: BELONGS TO THE HYPB/HUPM FAMILY.
                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.

STRAIN-H16 / ATCC 17699;

MEDLINE-9356597; PubMed-8352644;

MEDLINE-9356597; PubMed-8352644;

Dernedde J., Eithnger M., Friedrich B.;

"Analysis of a pleiotropic gene region involved in formation of catalytically active hydrogenases in Alcaligenes eutrophus H16.";

Arch. Microbiol. 159:545-553(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P31902;
01-JUL-1993
01-NOV-1995
15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                       Alcaligenes eutrophus (Ralstonia eutropha).
Plasmid megaplasmid pHG1.
Bacteria; Proteobacteria; beta subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYPB.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HYDROGENASE
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EMBL; Z99124; CAB16100.1; --
Subtilist; BG10022; yybī.
Hypothetical proteain.
SEQUENCE 262 AA; 30149 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                 Pro; IPR002894;
PF01495; Hyps r
                      Plasmid
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5 (Rel. 32, Last sequence)
9 (Rel. 38, Last annotate)
10 EXPRESSION/FORMATION P
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          AA;
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ilarity 100.0%;
Conservative
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      38483 MW;
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BC42976B7C5F75C4 CRC64;
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Pred. No.
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ADDISON AND STEED BEING STEED 
                 RT glutathione-dependent formaldehyde dehydrogenase from Escherichia RT coll: a class III alcohol dehydrogenase from Escherichia RT coll: a class III alcohol dehydrogenase from Escherichia RT coll: a class III alcohol dehydrogenase.";

RL Blochemistry 3:475-481(1992).

CC -!- FUNCTION: HAS HIGH FORMALDEHYDE DEHYDROGENASE ACTIVITY IN THE CLASSENCE OF GLUTATHIONE AND CATALYZES THE OXIDATION OF NORWALL CLASSENCE OF GLUTATHIONE AND CATALYZES THE OXIDATION OF NORWALL CLASSENCE OF GLUTATHIONE THAN THOSE FORMED FROM GSH. INCLUDING CLASSENCE OF GLUTATY ACIOS, ALSO ARE SUBSTRATES.

CI -- CATALYTIC ACTIVITY: ALCOHOL + NAD(+) = ALDEHYDE OR KETONE + NADH.

CI -- CATALYTIC ACTIVITY: FORMALDEHYDE + GLUTATHIONE + NADH.

CI -- COFACTOR: REQUIRES ZINC FOR ITS ACTIVITY (4 IONS OF ZINC PER DIMER).

-- SUBUNIT: HOMODIMER.

-- SUBUNIT: BELONGS TO THE ZINC-CONTAINING ALCOHOL DEHYDROGENASE FRAMILY. CLASS-III SUBFAMILY.

-- CAUTION: REP: 1 AND REF: 4 SEQUENCE DIFFERS FROM THAT SHOWN DIFF TO a FRAMESHIFT IN POSITION 26
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Matches 6
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ADH3_ECOLI STANDARD;
P25437; P75696; Q47533;
O1-MAY-1992 (Rel. 22, Created)
O1-NOV-1997 (Rel. 35, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
ALCOHOL DEHYDROGENASE CLASS III (EC 1.1.1.1)
ALCOHOL DEHYDROGENASE) (EC 1.2.1.1) (FDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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Federspiel N., Hyman R., Kalman S., Komp C., Kurdi O.,
Namath A., Oefner P., Roberts D., Schramm S., Davis R.!
Submitted (NOV-1996) to the EMBL/GenBank/DDBJ database
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Blattner F.R., Plunkett G. III, Bloch C.,
Riley M., Collado-Vides J., Glasner J.D.,
Cregor J., Davis N.W., Kirkpatrick H.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-97426617;
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Matsumoto K.,
ed (SEP-1997) t
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EMBL/GenBank/DDBJ
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Matches
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P19854;
Ol-FEB-1991 (Rel. 17, Created)
Ol-FEB-1991 (Rel. 17, Last sequence upo
Ol-FEB-1991 (Rel. 39, Last annotation of the company o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
CONFLICT
SEQUENCE
                  dehydrogenases. Differences among the thre
FEBS Lett. 222:99-103(1987).
-:- FUNCTION: CLASS-III ADH IS REMARKABLY
ETHANOL, BUT IT READILY CATALYZES THE
PRIMARY ALCOHOLS AND THE OXIDATION OF
                                                                                                                                                                                                                                                           MEDLINE-90105360; PubMed-2690942;
Kaiser R., Holmquist B., Vallee B.L., Joernvall
"Characteristics of mammalian class III alcohol
enzyme less variable than the traditional liver
Biochemistry 28:8432-8438(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HORSE
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                                                                                                                                                                         SEQUENCE OF 1-6.
MEDLINE=88005160; 1
Fairwell T., Julia
                                                                                                                                                                                                                                                                                                                                                                                                                                         Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EcoGene; EG50010; adhC. InterPro; IPR002085; -. InterPro; IPR002328; -.
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P19854;
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                                                                                                         "Acetylated N-terminal structures dehydrogenases. Differences among
                                                                                                                                                         Joernvall H
                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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D38504; BAA22412.1; -.
AE000142; AAC73459.1; -.
U73857; AAB18081.1; ALT_FRAME.
P11766; ITEH.
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PS00059; ADH_ZINC;
uctase; Zinc; NAD.
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a P., Kaiser R.,
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(SECOND ATOM) ()
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86;
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                    INEFFECTIVE IN OXIDIZING OXIDATION OF LONG-CHAIN S-(HYDROXYMETHYL)
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r enzyme of class
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(FDH) (FALDH)
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InterPro; IPR002085; InterPro; IPR002328; Pfam; PF00107; adh\_zinc

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"Cloning and characterization of the ADH5 gene encoding dehydrogenase 5, formaldehyde dehydrogenase."; Gene 121:305-311(1992).
                                                                                                                                                                                                                                                     [1]
SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE-90056459; PubMed-2818582;
Sharma C.P., Fox E.A., Holmquist B., Joernvall H., Valler
"CDNA sequence of human class III alcohol dehydrogenase."
"CDNA sequence of human class III alcohol dehydrogenase."
                                                                                                                                                                   "Cloning and comparative mapping of a human class dehydrogenase cDNA.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADHX_HUMAN STANDARD; PRT; 373 AA.

P11766;
01-OCT-1989 (Rel. 12, Created)
01-APR-1990 (Rel. 14, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ALCOHOL LEYYDROGENASE CLASS III CHI CHAIN (EC 1.1.1.1)
DEPENDENT FORMALDEHYDE DEHYDROGENASE) (EC 1.2.1.1) (FDH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR002326;
InterPro; IPR002326;
Pfam; PF00107; adh_zinc; 1.
PROSITE; PS00059; ADH_ZINC; 1.
PROSITE; PS00059; ADH_ZINC; 1.
ACETYLATION (BY SIMILARITY).
ACETYLATION (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -1- COFACTOR: REQUIRES ZINC FOR ITS ACTIVITY.
-1- SUBCUNIT: HOMODIMER.
-1- SUBCULIVIAR LOCATION: CYTOPLASMIC.
-1- SIMILARITY: BELONGS TO THE ZINC-CONTAINING ALCOHOL DEHYDROGENASE FAMILY. CLASS-II SUBFAMILY.
PIR: 802617; S02617.
PIR: A33419.
HSSP: P11766; 1TEH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATALYTIC ACTIVITY: ALCOHOL + NAD(+) = ALDEHYDE OR KETONE + NADH. S-FORMYLGLUTATHIONE + NADH. COPACTOR: REQUIRES ZINC FOR ITS ACTIVITY.
                                                                                                                                                                                                                 PubMed=2679557;
.F., Kozak C., Moretti T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZINC (CATALYTIC).
ZINC (CATALYTIC).
ZINC (CATALYTIC).
ZINC (SECOND ATOM).
ZINC (CATALYTIC).

ZINC (CATALYTIC).

MPORTANT FOR FDH ACTIVITY AND ACTIVATION BY FATTY ACIDS (BY SIMILARITY).

MW; 491F01B0A7D43D32 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 30; DB Pred. No. 87; 2; Mismatches
                                                                                                                                                 164:453-460(1989)
                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata;
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
87;
                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae;
                                                                                                                                                                                                                     O'Brien
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                                                                                                                                                                            III (chi) alcohol
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                                                       human
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                                                       alcohol
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       ***X **CRYSTALLOGRAPHY (2.7 ANGSTROMS).

**X **X **MEDLINE=97170743; PubMed=9018047;

**X **X **YAST Z.-N., BOSTON W.F., HUTLEY T.D.;

**YAST Z.-N., BOSTON W.F., HUTLEY T.D.;

**T **STRUCTURE of human chi chi alcohol dehydrogenase: a glutathione-

**T **T **CRYSTALLOGRAPHY (2.7 ANGSTROMS).

**Z **CRYSTALLOGRAPHY (2.7 ANGSTROMS).

**Z **CI- FUNCTION: CLASS-310-343(1997).

**Z **C-1- FUNCTION: CLASS-311 ADH 1S REMARKABLY INEFFECTIVE IN OXIDIZING THE OXIDATION OF LONG-CHAIN CONTRACTIVE TRADILY CATALYZES THE OXIDATION OF LONG-CHAIN CONTRACTIVE ACTIVITY: ALCOHOL + NAD(+) = ALDEHYDE OR KETONE + NADH.

**Z **COPACTOR: REDUIRES ZINC FOR ITS ACTIVITY.

**Z **COPACTOR: REDUIRES ZINC FOR ITS ACTIVITY.

**Z **COPACTOR: REDUIRES ZINC FOR ITS ACTIVITY.

**Z **COPACTOR: REDUIRES ZINC FOR ITS ACTIVITY.
                                                                                EMBL; M30471; AAA79018.1;
EMBL; M29672; AAA51597.1;
EMBL; M81118; AAA51596.1;
EMBL; M81112; AAA51596.1;
JOINED EMBL; M81113; AAA51596.1; JOINED EMBL; M81113; AAA51596.1; JOINED EMBL; M81115; AAA51596.1; JOINED EMBL; M81116; AAA51596.1; JOINED EMBL; M81116; AAA51596.1; JOINED EMBL; M81117; AAA51596.1; JOINED EMBL; M81117; AAA51596.1; JOINED EMBL; M81117; AAA51596.1; JOINED PIR; A3428; DEHCC2,
PIR; A36739; A36739.
PIR; A36739; A36739.
                                        MIM; 103710;
MIM; 136490;
                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM use by non-profit institutions as long as its content entities requires a license agreement (See http://www.isb-srend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  binding site required for fatty acid activation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PARTIAL SEQUENCE, AND MUTAGENESIS OF ARG-114.

MEDLINE-93264427; PubMed-0494891;

HOlmquist B., Moulis J.M., Engeland K., Vallee B.L.;

"Role of arginine 115 in fatty acid activation and formaldehyde dehydrogenase activity of human class III alcohol dehydrogenase."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Mutation of Arg-115 of human class III alcohol dehyd
binding site required for formaldehyde dehydrogenase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Engeland K., Hoeoeg Vallee B.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-93211987; PubMe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-88209465; PubMed=3365377; Kaiser R., Holmquist B., Hempel J., Vallee B.L., Joernvall H.; "Class II human liver alcohol dehydrogenase: a novel structural Biochemistry related to the class I and class II enzymes."; "s1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MUTAGENESIS OF
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SEQUENCE.
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MEDLINE=88209465;
                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLIAR LOCATION: CYTOPLASMIC.
MISCELLANDOUS: THERE ARE 7 DIFFERENT ADH'S I
THREE BELONGS TO CLASS-T: ALPHA, BETA, AND G
PI, ONE TO CLASS-III: CHI, ONE TO CLASS-IV:
CLASS-V: ADH6.
SIMILARITY: BELONGS TO THE ZINC-CONTAINING A
FAMILY. CLASS-III SUBFRAMILY.
                                                                       1TEH; 07-DEC-96
IPR002085;
IPR002328;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         GS TO THE ZINC-CONTAINING ALCOHOL DEHYDROGENASE SUBFAMILY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Holmquist B.,
                                                                                                                                                                                                                                                                                                                 (See http://www.isb-sib.ch/announce/
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GAMMA, ONE TO CLASS-II:
ADH7 AND ONE TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dehydrogenase:
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|:||: || 118 GKGLMPDG 125

1 GRGLVQDG 8

Query Match Best Local

Local

Similarity 5; Conser

71.48; 62.58;

Conservative

2;

SEQUENCE BINDING METAL METAL METAL METAL

373

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.39440

WW;

1 44 66 96 99 102 110 173 114

44 66 96 99 102 110 110 173

Matches

RESULT 15
ADHX\_HMAN
ID ADHX\_HM
AG P11766
DT 01-APR
DT 30-MAY
DE ALCOHO
DEPEND
GN ADH5 0
OS HOMO S
OC Manmal
OX NCBLT
RN [1]
RP SEQUEN
RX MEDLIN
RX

Eukaryota; Metazoa; Mammalia; Eutheria; NCBI\_TaxID=9606; ADH5 OR ADHX OR FDH Homo sapiens (Human)

s (Human).

Metazoa; Chordata; C

MEDLINE=93077045; PubMed=1446828

"Cloning

SEQUENCE FROM N.A. Hur M.W., Edenberg

Biophys.

Res. Commun.

Seuanez H.N., Giri P.R., SEQUENCE FROM N.A. MEDLINE=90026418;

Krug J.F., N., Goldman

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DR PFDM; PF00107; adh_zinc; 1.

DR PROSITE; PS00059; ACH_ZINC; 11.

KW Oxidoreductase; Zinc; NAD; Multigene family; Acetylation;

FT HETAL

FT HINT_METY

METAL

10 10 2 100 2 21NC (SECOND ATOM).

FT METAL

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166 166 D -> Y (IN REF. 2).

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SO SEQUENCE

373 AA; 39593 MW; A4EALA8D6F0424F4 CRC64;

Ouery Match

Dest Local Similarity 62.5%; Pred. No. 87;

Matches

5; Conservative

2; Mismatches

1; Indels

0; Gaps

0;

Ouery Match

1; I: | |

Db 118 CKGLMPDG

125

Search Completed: June 13, 2001, 14:21:45

Job time: 805 sec
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This pope short (USDIC)

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Title:
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1: sp_archea:*
2: sp_bacteria:*
3: sp_fung1:*
4: sp_human:*
5: sp_invertebra
6: sp_manmal:*
7: sp_mhc:*
8: sp_organelle
9: sp_blage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_unclassi
13: sp_vertebra
14: sp_virus:*
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Match
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83.3
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78.6
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4.152 Million cell updates/sec
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Q52737 rhodococcus
O9k9c9 bacillus ha
Q9uuf6 schizosacch
Q8r268 bartonella
Q29120 archaeoglob
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Opp2p7 homo sapien
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O33492 pseudomonas
Opp366 neurospora
O58856 synechocyst
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Q9js76 chlamydia p	Q9k1x5 chlamydia p	Q)	Q9v189 drosophila	O61540 drosophila	Q9vnc5 drosophila	Q9kvt3 vibrio chol	Q9vvb8 drosophila	Q9zb14 streptomyce		Q9yrb4 banana bunc		Q96595 aotine herp	O06264 mycobacteri	Q9shf2 arabidopsis	Q9utr5 schizosacch	Q9uv87 didymella b	Q9zta5 arabidopsis	S	Q9n8u6 trypanosoma	Q9lie4 arabidopsis	Q94316 caenorhabdi		Q9ycz8 aeropyrum p	Q9nh66 ctenocephal	Q66666 equine herp

## ALIGNMENTS

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RESULT
Q9NRF2
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
HYPOTHETICAL 57.3 KDA PROTEIN (FRAGMENT).
ENFZP547G1110.
                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein.
NON_TER 1
SEQUENCE 540 AA; 5
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Submitted (MAY-1999) to the
EMBL; AL049924; CAB43208.1;
HSSP; P29353; 1MIL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PFAM; PF00017; SH2; 1. PFAM; PF00169; PH; 1.
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[1]
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EMBL/GenBank/DDBJ databases.
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Pred. No.
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Query Match  Beary Match  Hatches Local Similarity 88.1%; Score 37; DB 4 CRC64;  Oy 1 GRGLVODG 8 75%; Pred. No. 29;  Db 210 [/ /	7; Conservative 80.18; Score 37, DB 4; Length 671;	AC O9NRE2 DT O1**OCT**2000 (TIEMBLES! 15, Created) DT 01**OCT**2000 (TIEMBLES! 15, Created) DT 01**OCT**2000 (TIEMBLES! 15, Last sequence update) DT 01**OCT**2000 (TIEMBLES! 15, Last sequence update) DE 912**OCT**2000 (TIEMBLES! 15, Last sequence update) OS SH2B BETA SIGNALING PROTEIN.  OS HOMO SAPIENS (Human).  OC Mammalia; Euthazoa; Chordata; Craniata; Vertebrata; Euthazoa; Chordata; Euthazoa; Chordata; Primates; Catarrhini; Hominidae, Homo.  RN (13-Taxn)**OSO6; As Primates; Catarrhini; Hominidae, Homo. RR NISHI M. Werner E. RR NISHI M. Werner E. SO EMBL; AF22968; ANF3913 the EMBL/GenBank/DBBJ databases.  SO EMBL; AF22968; ANF3913; EMBL/GenBank/DBBJ databases.  Ouery Match Matches ST AA; 70750 MM; 63DD86EC967991ED Coc.
SO SMBL, AS' (AAN-2006) dimerit D. Die Pagnon S. Lee J. Shoelson S.;  Query Match Best Local Similarity B8.1% CODEFO271E1C44D3 CRC64;  Oy 1 GRCLVODG B. Pred. No. 32;  Length / 1  Db 210 [H/]    Db 210 [H/]    RESULT 6  AC 033492  AC 033492  DT 01-ANN-1980 (TERMBLTel. 05 Created) OS STYREM EASOR KINNSE. 15 Last annotation update)  RM MAIL RESULT B- SHORT AND SHORT B- SHO	Ouery Match Best Local Similarity 88.1%; Score 37; DB 4; Length 730;  Oy 1 GRGLVODG 8  Db 269   1	PCT-USO1-05825a-12.rspt  RN [1] RP SEQUENCE FROM N.A. RC TISSUE-BRAIN, RT TISSUE-BRAIN, RT Predict, Kikuno R., Ishikawa K., RT The Complete Sequences of Sequences of Unidentified human genes you also not be sequences of unidentified human genes you not not seal to the code of the complete sequences of unidentified human genes XVI SO SEQUENCE 730 AA, 75-7-1, 1 AND 377-1, 1 AND 377

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INTERPRO; IPRO00010; -.
INTERPRO; IPRO00700; -.
INTERPRO; IPRO01610; -.
INTERPRO; IPR001789; -.
INTERPRO; IPR001789; -.
PFAM; PF00072; response_reg; 1
PFAM; PF00512; signal; 2.
PFAM; PF00785; PAC; 1.
                                                                                          055856 PRELIMINARY;
055856;
01-NOV-1996 (TrEMBLrel. 0
01-NOV-1996 (TrEMBLrel. 0
01-JUN-2000 (TrEMBLrel. 1
SEQUENCE FROM N.A. STRAIN-PCC6803; MEDLINE-96127529; PKaneko T., Tanaka A
                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9P366;
                                             Synechocystis sp. (strain Bacteria; Cyanobacteria; Cyanobacteria; NCBI_TaxID=1148;
                                                                                                                                                                                                                                                             German Neurospora genome project;
Submitted (APR-2000) to the EMBL/GenBank/DDBJ
EMBL; AL353820; CAB88569.1; -
SEQUENCE 288 AA; 32004 MW; AA47812F595ABII
                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
SChulte U., Aign V., H
Nyakatura G., Mewes H.
Submitted (APR-2000) t
                                                                                                                                                                                                                                                                                                                                                               Neurospora crassa.
Eukaryota; Fung1;
NCBI_TaxID=5141;
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439 GRGLYSDG
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A; 108745 MW;
PubMed-8590279;
A., Sato S., Ko
                                                               (strain
                                                                                                                                                                                                                                                                                                                                                                          Ascomycota;
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H.W., Mannhaupt G.;
to the EMBL/GenBank/DDBJ
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Last sequence update)
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Τ.
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Miyajima
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"I Synechocystis sp. strain PCC6803. II. Sequence determination of the
"entire genome and assignment of potential protein-coding regions.";
"IDNA Res. 3:109-136(1996).
"IN EMBL; D64004; BAA10612.1; -.
"IN INTERPRO; IPR000595; -.
"IN INTERPRO; IPR001140; -.
"IN INTERPRO; IPR001140; -.
"IN INTERPRO; IPR001147; -.
"IN INTERPRO; IPR00117; -.
"IN INTERPRO; IPR001117; -.
"IN INTERPRO; IPR0011117; -.
"IN INTERPRO; IPR001117; -.
"IN INTERPRO; IPR001117; -.
"IN INTERPRO; 
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Q9UV85;
01-MAY-2000
01-MAY-2000
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SEQUENCE
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STRAIN-ATCC12330;
Liu Y.J., Whelen S., Hall B.D.;
"Phylogenetic relationships among
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Curvularia brachyspora.
Eukaryota; Fungi; Ascomycota; Pleosporales; anamorphic Pleosporaceae; Curvularia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
DNA-DEPENDENT RNA POLYMERASE II RPB140 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Naka Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimura Hosouchi T., Matsuno A., Muraki A., Nakazaki N., Naruo K., Shimpo S., Takeuchi C., Wada T., Watanabe A., Yamada M., Yabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Sequence analysis of the genome of the unicellular cyanobacterium "Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis sp. strain PCC6803. I. Sequence features in the 1 Mb region from map positions 64% to 92% of the genome."; DNA Res. 2:153-166(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        polymerse II subunit.";
Mol. Biol. Evol. 16:1799-1808(1999).
EMBL; AF107803; AAF19075.1; -
INTERPRO; IPR001572;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=97061201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PFAM; PF00562; RNA_PO1_B; 2.
PROSITE; PS01166; RNA_PO1_BETA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=39400;
         485
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RGLIQDG 491
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                                                                                                                                                                                  Similarity 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                     942
942 AA;
                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
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106398
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                                                                                                                                                                                                                                                                                                                                                                                                          MW;
                                                                                                                                                                              Score 35; DB
Pred. No. 1.1e
1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                          FB508BDD91A90982 CRC64;
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                                                                                                                                                                                                                            DB 3; ; 1.1e+02;
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mura T.,
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RESULT
Q9KYF3
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Q9LIST
ID Q9
AC Q9
D7 01
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O9UV84
AC O9UV84
AC O9UV84
DT 01-MAY
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DT 01-MAY
DT 01-JUN
DE DNA-DE
GN RPB2.
OS P1eosp
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OX NCBI_T
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RP SEQUEN
RT P5AJI
RT P6AJI
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Best Local Similarity
Matches 6; Conser
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Best Local S
Matches 6
                                                                                                                                                                                                                                                                    STRAIN-CV. NIPPONBARE;
Sasaki T., Matsumoto T., Yamamoto K.;
"Oryza sativa nipponbare(GA3) genomic DNA, chromosome 1, i
clone:P0469E09.";
Clone:P0469E09. "
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AP001366; BAA92410.1;
SEQUENCE 152 AA; 16852 MW; 5D32B935DE81D619 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O9LI57
O9LI57
OPLI57
OPLI57
OPLI57
O1-OCT-2000 (TrEMBLrel. 15, Created)
O1-OCT-2000 (TrEMBLrel. 15, Last sequence update)
O1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
HYPOTHETICAL PROTEIN.
Oryza sativa (Rice).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnoliophyta; Liliopsida; Poales; Poaceae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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NON_TER
SEQUENCE
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MOl. Biol. Evol. 16:1799-1808(1999).

EMBL; AF107804; AAF19076.1;

INTERPRO; IPRO01572;
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Q9UV84;
01-MAY-2000
01-MAY-2000
01-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-EGS04-188C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pleospora herbarum.
Eukaryota; Fungi; Ascomycota;
NCBI_TaxID=33177;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE;
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                                                                                                             GRGLVQDG
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                                                                                      GRGLAKDG
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TE; PS01166; RNA_POL_BETA;
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                                                                                                                                                                             Conservative
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942 AA;
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(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 14, Last annotation update)
NT RNA POLYMERASE II RPB140 (FRAGMENT).
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85.7%;
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                                                                                                                                                                   Score 34; DB
Pred. No. 22;
1; Mismatches
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1; Mismatches
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1.1e+02;
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                                                                                                                                                                                                              DB 10;
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ACCOMPAND ACCOMP
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Q00546
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Best Local S
Matches 6
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Q00546; QTEMBLTel. 01, C;
01-NOV-1996 (TIEMBLTel. 01, L;
01-NOV-1996 (TIEMBLTel. 01, L;
01-JUN-2000 (TIEMBLTel. 14, L;
RESTRICTIN PRECURSOR.
                                                INTERPRO;
INTERPRO;
INTERPRO;
                                                                                                                                                                                                                                                                                                          MEDLINE-92265298; PubMed=1375037;
Noerenberg U., Wille H., Wolff M., Frank R., Rathjen
"The chicken neural extracellular matrix molecule res
similarity with EGF-, fibronectin type III-, and fibr
                                                                                                                                                                          Neuron 8:849-863(1992).
EMBL; X64649; CAA45920.1;
PIR; JH0675; JH0675.
HSSP; P24821; ITEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
TISSUE=BRAIN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kinashi H., Hopwood D.A.;

"A set of ordered cosmids and a detailed genetic and the 8 Mb Streptomyces coelicolor A3(2) chromosome.";

Mol. Microbiol. 21:77-96(1996).

EMBL; AL356612; CAB92370.1;

SEQUENCE 687 AA; 70938 MW; B6AD2F58253C5889 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-A3(2);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Redenbach M., Kieser H.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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Bentley S.D., Park
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptomyces coelicolor.

Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
NCBI_TaxID=1902;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted
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Brown S.P., H
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                                         ; IPR000561; -.; IPR000950; -.; IPR001777; -.; IPR002181; -.
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75.0%;
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e EMBL/GenBank/DDBJ databases.
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Pred. No.
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1.2e+02;
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Best Local Similarity 75.0
Matches 6; Conservative
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Best Local Similarity 75.0
Matches 6; Conservative
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SIGNAL
SEQUENCE FROM N.A.
STRAIJA-C-125 / JCM 9153;
TAKAMIH H., NAKASONE K., Takaki Y.;
Takami H., Nakasone K., Takaki Y.;
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AP001516; BAB06439.1; -.
SEQUENCE 295 AA; 34308 MW; 1BDE317EDA39B764 CRC64;
                                                                                                                                                                                      Bacillus halodurans.
Bacteria; Firmicutes; Bacillus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.
NCBI_TaxID-86665;
                                                                                                                                                                                                                                                                                                                             01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
BH2720 PROTEIN.
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Q52737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Robert D. Nishiyama M., Horinouchi S., Beppu T.; "Characterization of nitrile hydratase genes cloned from Rhodococcus erythropolis"; Biosci. Biotechnol. Biochem. 57:1323-1328(1993). EMBL; D14454; BAA03348.1; "HSSP; P134448; IAHD. HSSP; P13448; IAHD. 23116 MW; F331BC6411FCA394 CRC6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-JCM6823;
MEDLINE-93379358; PubMed-7764017;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rhodococcus erythropolis.
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Nocardiaceae; Rhodococcus.
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PROSITE; PS00022; EGF_1; UNKNOWN_5.

PROSITE; PS00241; RECEPTOR_CYTOKINES_1; UNKNOWN_1.

PROSITE; PS01186; EGF_2; 4.
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NOV-1996 (TrEMBLrel. 12, Last annotation update)
NITRILE HYDRATASE ALPHA SUBUNIT.
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NCBI_TaxID=1833;
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34 1353 RESTRICTIN.
1353 AA; 148278 MW; CD8393C42O3171D9 CRC64;
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75.0%;
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Pred. No. 49;
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Pred. No. 2.5e+02;
1; Mismatches 1
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Matches 7
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                                Similarity 7; Conserv
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87.5%;
                                Score 33; DB Pred. No. 74; 0; Mismatches
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Search completed: June Job time: 732 sec

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Run on: OM protein

Sequence

55, Appl
2, Appl
2, Appl
3, Appl
80, Appl
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80, Appl
80, Appl
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2: //ogn2_6/ptodata/2/1aa/5B_COMB.pep:*
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4: //ogn2_6/ptodata/2/1aa/6B_COMB.pep:*
5: //ogn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
5: //ogn2_6/ptodata/2/1aa/backfiles1.pep:*
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   PCT-US01-05825A-12
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(without alignments)
1.296 Million cell updates/sec
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Gapop 10.0 , Gapext 0.
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US-07-843-125-11
US-08-973-068-5
US-08-973-002A-3
US-08-863-010-3
US-08-863-010-3
US-08-464-339A-12
US-08-468-847B-12
US-08-468-847B-12
US-08-468-847B-11
US-08-820-170A-34
US-08-90-273-565-34
US-08-919-93-2
US-08-652-816A-12
US-08-652-1816A-12
US-08-919-93-2
US-08-911-349-4
US-08-911-349-4
US-08-911-349-6
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6, Appli
                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 246 amino acids
TOPDE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-843-125-11
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US-07-843-125-11
             В
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                                                      Query Match
Best Local S
Matches 7
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                                                                                                                                                                            TELEFAX: (201) 235-3500 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIF: 07110-1199

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIAN PATA:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: George M. Gould, Esq.,
                                                                                                                                                                                                                                 CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ROSeman, Catherine
REGISTRATION NUMBER: 3424
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Dillon, Patrick J
APPLICANT: Rosen, Craig A
TITLE OF INVENTION: Methods for Producing Proteins which
TITLE OF INVENTION: Bind to Predetermined Antigens
                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: (201) 235-6208
                                                                                                                                                                                                                                                                                                                                                                 STREET: 340 Kingsl:
CITY: Nutley
STATE: New Jersey
COUNTRY: U.S.A.
ZIP: 07110-1199
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 199202
                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
             8
                         GRGLVQDG 8
             GRGLVQPG 15
                                                      Similarity 7; Conserv
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                                                                 83.3%;
87.5%;
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US-08-759-804A-54
US-08-859-931A-2
US-08-053-451B-113
US-08-471-780C-80
US-08-471-282A-80
US-08-467-710C-80
US-08-466-739C-119
US-08-467-282B-119
US-08-467-282B-119
US-08-467-282B-119
US-08-467-282B-119
US-08-467-282B-119
US-08-467-282B-119
US-08-467-282B-119
US-08-468-739C-119
US-08-468-739C-119
US-08-468-739C-719
US-07-988-925-71
                                                                                                                                                                                                                         8594
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                                                      Score 35; DB
Pred. No. 14;
0; Mismatches
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Result

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Length 246;

0;

Gaps

0

Minimum DB Maximum DB

Database

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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Dale, James Langham
APPLICANT: Harding, Robert Maxwell
APPLICANT: Harding, Robert Maxwell
APPLICANT: Beetham, Peter Ronald
APPLICANT: Beetham, Peter Ronald
APPLICANT: Hafner, Gregory John
APPLICANT: Hefner, Gregory John
APPLICANT: Hecker, Douglas Kenneth
TITLE OF INVENTION: INTERCENIC REGIONS OF BANANA BUNCHY TOP VIRUS
FILE REFERENCE: 09657/002001
CURRENT APPLICATION NUMBER: US/08/973,068
CURRENT FILING DATE: 1998-03-12
EARLIER APPLICATION NUMBER: PCT/AU96/00335
NUMBER OF SEQ ID NOS: 61
SOFTWARE: FastSEQ for Windows Version 3.0
IENGTH: 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-537-002A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; ORGANISM: Banana Bunchy Top Virus (BBTV)
US-08-973-068-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity /1.*
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/08537002A Patent No. 5773282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JS-08-973-068-5
                            APPLICATION NUMBER: JP No. 5773282 yet received FILING DATE: 08-SEP-1995
ATTORNEY/AGENT INFORMATION:
NAME: BROWDY, ROGET L.
REGISTRATION NUMBER: 25,618
                                                                                                                                    CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: JP 260984/1994
FILING DATE: 01-OCT-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        atent No. 5773282
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/08973068 Patent No. 6127604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: TSUSAKI, Keiji
APPLICANT: KUBOTA, Michio
APPLICANT: SUGINOTO, Toshiyuki
TITLE OF INVENTION: RECOMBINANT THERMOSTABLE ENZYME FOR
TITLE OF INVENTION: CONVERTING MALTOSE INTO TREHALOSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:

CORRESPONDENCE ADDRESS:

ADDRESSEE: BROWDY AN
                 REFERENCE/DOCKET NUMBER: TSUSAKI=1
                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/537,002A FILING DATE: 29-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75 GRGIVED 81
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4; Length 117;
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                                                                                  TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
OLECULE TYPE:
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STRANDEDNESS:

H: you acid : amino acid single

Linear

peptide

963 amino acids

LENGTH:

D

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RESULT 4
US-08-863-010-3
                                                                                                      CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/537,002
EILING DATE: 29-SEP-1995
APPLICATION NUMBER: JP 260984/1994
FILING DATE: 01-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP NO. 6087146 yet received
ATTORNEY/AGENT INFORMATION:
NAME: DECEIVED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-08-537-002A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. 6087146
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/08863010
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TELEX: 248633
INFORMATION FOR SEQ ID NO: :
SEQUENCE CHARACTERISTICS:
LENGTH: 963 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match

Best Local Similarity

Matches 6; Conserv
                         NAME: BROWDY, ROGET L.
REGISTATION NUMBER: 25,618
REFERENCION CONTROL TSI
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-528-5197
                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PatentID Release #1.0, Version #1.30
APPLICATION NUMBER: US/08/863,010
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                          CITY: Washington
STATE: D.C.
COUNTRY: USA
ZIP: 20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: SUGIMOTO, TOShiyuki
TITLE OF INVENTION: CONVERTING MALTOSE INTO TREHALOSE
TELEPHONE: 202-737-3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-628-5197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: amino acid
STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3 GLVQDG 8
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                                                                                                                                                                                                                                                                                                                                                                                                         20004
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419 Seventh Street, N.W., Suite 300
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KUBOTA, Michio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         963 amino acids
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                                                            TSUSAKI-1
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                                                                                                                              ; MOLECULE TYPE: US-09-024-429-3
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                                                       Matches
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                        APPLICATION NUMBER: JP 25829
APPLICATION NUMBER: JP 25829
ETLING DATE: 08-SEP-1995
ATTORNEY/AGENT INFORMATION:
NAME: YUN, Allen C.
REGISTRATION NUMBER: 37,971
REFERENCE/DOCKET NUMBER: TSUS
TELEPHONE: 202-628-5197
TELEFAX: 202-737-3528
                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 963 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US 01
FILING DATE: 29-SEP-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 01-OCT-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                   TELLEFAX: 248633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
 725 GLVQDG 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         725 GLVQDG 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OPERATING SYSTEM:
SOFTWARE: Patenti
                                                         Local Similarity
les 6; Conserv
                                                                                                                                                                     STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/024,429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE:
                            3 GLVQDG 8 ·
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5. 6165768
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                                                                                                                                                                                   : 963 amino acids
amino acid
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KUBOTA, Michio
SUGIMOTO, Toshiyuki
VENTION: RECOMBINANT THERMOSTABLE ENZYME FOR
VENTION: CONVERTING MALTOSE INTO TREHALOSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                       Conservative
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BROWDY AND NEIMARK
                                                                                                                                            peptide
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08-SEP-1995
                                                                                                                                                                     single
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100.0%; Prr
                                                      73.8%; Score 31;
100.0%; Pred. No.
Live 0; Mismatc
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                                                       ore 31; DB 4;
red. No. 3.4e+02
Mismatches 0
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. 3.4e+02;
                                                                                  Length 963;
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COUNTRY:
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US-08-545-809A-143; Sequence 143; Application US/08545809A; Patent No. 6096878
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US-08-464-339A-12
                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 90 AMINO ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: LI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 32
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/I
FILING DATE: 9 DEC 1994
ATTORNEY/AGENT INFORMATION:
NAME: MULLINS, J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                          NUMBER OF SEQUENCES: 1
                                                                                    APPLICANT: Honjo, Tasuku
APPLICANT: Matsuda, Fumihiko
TITLE OF INVENTION: HUMAN IMMUNOGLOBULIN VH GENE
TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
                                                                                                                                                                                                                                                              42 GVGLVRDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 33,073
              CITY: Boston
                              STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: U
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                          1 GRGLVQDG 8
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5. 5747280
                                                                                                                                                     INFORMATION:
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RY: NEW JERSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07068
ΜĎ
                            225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6 BECKER FARM ROAD
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                                                                                                                                                                                                                                                                                                                         Conservative
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                                               Fish &
                                                                                                                                                                                                                                                              49
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                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Factor
: 17
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                                                                                                                                                                                                                                                                                                                                        71.48;
75.08;
                                            Richardson, P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human Vascular IBP-Like Growth
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Pred.
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1; Indels Length 374;

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Gaps

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US-08-468-847B-12
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Best Local Similarity 7
"---ches 6; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 116 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-545-809a-143
                   TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
                                  FILING DATE:
ATTORNEY/AGENT INFORMATION:
ANAME: MULLINS, J.G.
REGISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 3258
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1744
INFORMATION TOB 201-994-1744
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 12, Application US/08468847B Patent No. 5780263
                                                                                                                                                               APPLICATION NUMBER: US/08/468,847B FILING DATE: 6 June 1995 CLASSIFICATION: 435 PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 617-542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 143:
SEQUENCE CHARACTERISTICS:
LENGTH: 116 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                       COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: HUNDMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                               CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
ZIP: 07068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/545,809A
FILING DATE: 27-WAR-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Freeman, John W.
REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 06:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5970
                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN, ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: PCT/JP93/00603
FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27 GEGLVQPG 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GRGLVODG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 617-542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hastings, Gregg A. and Adams, Mark D. VENTION: Human CCN-Like Growth Factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                         INCH DISKETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71.4%; Score 30; 75.0%; Pred. No.
                                                                                    325800-442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
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                                                   В
                                                                                Qy
RESULT
                                                                                               Query Match
Best Local Similarity
Ches 6; Conserve
                                                                                                                                                                                                 LENGTH: 375 AMINO ACIDS
TYPE: AMINO ACID
STRANDEDNESS:
TOPOLOGY: LINEAR
MOLECULE TYPE: PROTEIN
US-08-459-101A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity 75.0%.
Best Local Similarity 75.0%.
Conservative
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; MOLECULE TYPE:
US-08-468-847B-12
                                                                                                                                                                                                                                                                                                                                                                                                        SOFTMARE: WORD PERFECT 5.1
SOFTMARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/4:
FILING DATE: June 2, 1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US9
FILING DATE: 12 JUL 94
ATTORNEY/AGENT INFORMATION:
NAME: FERRARO, GREGORY D.
NAME: FERRARO, GREGORY D.
NAME: FERRARO, GREGORY D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/08459101A Patent No. 5945300 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 375 AMINO ACIDS
                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
TELEPAX: 201-994-1744
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MEDIUM TYPE: 3.5 INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 6 LL.
STREET: NOSELAND
CITY: ROSELAND
CTATE: NEW JERSEY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN,
ADDRESSEE: CECCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
                                              42 GVGLVRDG 49
10
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                                                                              1 GRGLVQDG 8
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| |||:||
42 GVGLVRDG 49
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LENGTH: 374 AMINO ACIDS
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PS/
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: UZIP: 07068
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                                                                                                             Conservative
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                                                                                                                           71.48; 75.08;
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75.0%;
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Pred. No. 1.9e+02;
                                                                                                       Mismatches
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Length 375;

Indels

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Gaps

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US-08-468-847B-11

Sequence 11, Application US/08468847B Patent No. 5780263

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; MOLECULE TYPE:
US-08-468-8478-11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                              Sequence 34, Application US/08820170A Patent No. 5831058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 379 AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
ATTORNEY/AGENT INFORMATION:
ANAME: MULLINS, J.G.
REGISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 3258
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201,994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/01
FILING DATE: 6 June 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hastings, Gregg A. and Adams, Mark D. TITLE OF INVENTION: Human CCN-Like Growth Factor NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
                                                                                                                                                 NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                     APPLICANT: TSUTOMU, FUJIWARA
APPLICANT: Takeshi, WATANABE
APPLICANT: Masatto, HORIE
APPLICANT: Toyomasa, KATAGIRI
                                                                                                                                                                                    PPLICANT: TOYOMASA, KATAGIRI ITLE OF INVENTION: HUMAN GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 379 AMINO ACIDS TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                              42 GYGLYRDG 49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN, ADDRESSEE: CECCHI, STEWART & OLSTEIN
                                                      COUNTRY:
                                                                                         CITY: Washington
                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                1 GRGLVQDG 8
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                                    RY: United States
20037-3202
                                                                         D.C.
                                                                                                          E: Sughrue, Mion, Zinn, Macpeak & Seas 2100 Pennsylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LINEAR
Floppy disk
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75.0%;
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Pred. No. 2e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 12
US-09-055-699-34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 34,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                 TELEFAX: (202) 293-7860
TELEX: 6491103
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NFORMATION FOR SEQ ID NO:
TOPOLOGY: 11
MOLECULE TYPE:
9-055-699-34
                                                                                                                                                                                                                                                                                                 COUNTRY: United States
ZIP: 20037-3202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: TOYOMASA, KATAGIRI
TITLE OF INVENTION: HUMAN GENE
NUMBER OF SEQUENCES: 42
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 810 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 293-7060
TELEFAX: (202) 293-7860
TELEX: 6491103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 810 amino acids
                                                                                                                                                  TELEPHONE: (202) 293-7060
                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
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201 KGIIQDG 207
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                                                                                                                                               TELEPHONE:
                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1, Application US/09055699 6005088
                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Sughrue, Mion, Zinn, Macpeak & Seas
2100 Pennsylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Takeshi, WATANABE
Masato, HORIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tsutomu, FUJIWARA
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                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            71.4%;
                                                                                                                                                                                                                                                                       us/09/055,699
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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0;

Query Match

71.48;

Score 30;

DB 3;

Length 810;

Best Local Similarity 57.1 Matches 4; Conservative

57.1%;

Pred. No. 4.4e+02; 3; Mismatches 0;

Indels

0;

GB 9125579.4

US-09-273-565-34

Patent No. 6166190 GENERAL INFORMATION:

Application US/09273565A

APPLICANT: FUJIWARA, TSUTOMU APPLICANT: WATANABE, TAKESHI APPLICANT: HORIE, MASATO

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TITLE OF INVENTION: AN ISOLATED NUCLEIC ACID MOLECULE ENCODING HUMAN TITLE OF INVENTION: SKELETAL MUSCLE-SPECIFIC UBIQUITIN-CONJUGATING ENZYME FILE REEERBNCE: 0-53599

CURRENT APPLICATION NUMBER: US/09/273,565A

CURRENT FILING DATE: 1999-03-22

EARLIER APPLICATION NUMBER: 09/055,699

EARLIER APPLICATION NUMBER: 08/820,170

EARLIER APPLICATION NUMBER: 08/820,170

EARLIER APPLICATION NUMBER: JP 63410/1996

EARLIER APPLICATION NUMBER: JP 63410/1996

EARLIER FILING DATE: 1997-03-19

EARLIER APPLICATION NUMBER: JP 63410/1996

EARLIER FILING DATE: 1996-03-05

NUMBER OF SEQ ID NOS: 95

COPTIANDED: NOS: 95
                                                                    COUNTRY: United States of America
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTE: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Specific binding members, materials and TITLE OF INVENTION: methods.

NUMBER OF SEQUENCES: 53

CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                              E: Marshall, O'Toole, Gerstein, Murray & Borun
6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 810,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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Best Local Similarity /3.v.,
Best Local Similarity /3.v.,
Conservative
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US-08-318-157B-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: PCT/GB92/02240
FILING DATE: 02-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/244,597
FILING DATE: 01-UN-1994
ATTORNEY/AGENT INFORMATION:
NAME: David W. Clough
REGISTRATION NUMBER: 36,107
                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,157B
FILING DATE: 05-0CT-1994
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                   ZIP: 20007-5109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: HANSEN, APPLICANT: ARMOUR,
                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
LENGTH: 118 amino acid
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TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                        STREET: 3000 K S
CITY: Washington
STATE: D.C.
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PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER:
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                                                                                                                                                                                                                                                                                            ADDRESSEE:
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APPLICATION NUMBER:
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FILING DATE: 23-MAY-1996
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                                                                                                                                                                                                                                                               E: Foley & Lardner 3000 K Street, N.W., Suite 500
                                                                                                                                                                                                                   USA
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07-DEC-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UMBER: GB 9206372.6
23-SEP-1992
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24-MAR-1992
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CDR-GRAFTED TYPE III ANTI-CEA HUMANIZED
MOUSE MONOCLONAL ANTIBODIES
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Pred. No. 90;
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RESULT 14 US-08-652-816A-12

201 KGIIQDG 207

2 RGLVQDG 8

Patent No.

GENERAL INFORMATION:

APPLICANT: Osbourn, JK
APPLICANT: Allen, DJ
APPLICANT: McCafferty, JG
TINTENTION: Sneci

STREET: 6300 : CITY: Chicago

Illinois

ADDRESSEE:

APPLICATION NUMBER: FILING DATE: 23-MAY

MBER: US/08/652,816/ 23-MAY-1996

Sequence 12, Application US/08652816A Patent No. 5872215

; ORGANISM: Homo sapiens US-09-273-565-34

Query Match Best Local :

Local Similarity 57... hes 4; Conservative

71.48; 57.18;

Score 30; DB 4; Le Pred..No. 4.4e+02; 3; Mismatches 0;

SOFTWARE: PatentIn Ver. SEQ ID NO 34 LENGTH: 810

```
NAME: SAXE, Bernhard D.
REGISTRATION NUMBER: 28,665
REFERENCE/DOCKET NUMBER: 18733/464
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)672-5300
TELEPHONE: (202)672-5300
TELEPHONE: (202)672-5399
TELEX: 904136
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: mino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-318-157B-2

Ouery Match
Best Local Similarity 75.0%; Pred. NO. 90;
Matches 6; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Matches 6; Conservative 0; Mismatches 2; Indels 0; Gaps O;

Oy 1 GRGLVQDG 8
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Db 8 GGGLVQSG 15

Search completed: June 13, 2001, 14:16:35
Job time: 496 sec
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Result
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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seq length: 2000000000
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Match Length
100.0
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87.2
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B41718
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Human ORFX ORF1482
Human ORFX ORF1402
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Human normal uteru
Human TANGO 125b (
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Peptide antagonist
Human Zneul EGF-li
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Human TANGO 12	13	21	273	7	41	7
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Human PRO213-1	76	20	273	7.	41	w
Human ORFX ORF	4220	21	265	7.	41	2

## ALIGNMENTS

RESULT Y79117

Y79117;

Y79117 standard; Peptide; 8

A.

Peptide antagonist of zonulin. 05-JUN-2000 (first entry)

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Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological antivier; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                       WO200007609-A1.
                                                                            03-AUG-1998;
                                                                                                28-JUL-1999;
                                                                                                                    17-FEB-2000
                                                                                                                                                           Synthetic.
                                                         (UYMA-) UNIV MARYLAND BALTIMORE
                                                                             98US-0127815
                                                                                                99WO-US16683
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WPI; 2000-205565/18

New peptide antagonist of zonulin useful as antiinflammatory agent for

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Which bind to a zonula occludens Loxin (201) receptor, yet up the physiologically modulate the opening of mammalian tight junctions CC (TJ). The peptide antagonists are based on a common motif of ZOT CC and human zonulins, which is believed to be critical for receptor CC thinding. They can be prepared by chemical synthesis or by use of CC recombinant DNA techniques. The peptide antagonists are used as an CC infiammation, where they bind to the ZOT receptor in the intestinal CC and yet does not physiologically modulate the opening of TJ in the CC increased intestinal permeability and the peptide is useful for CC caused by infection, e.g. clostridium difficile infection, caused by infection, e.g. clostridium difficile infection, concerned by infection, bacterial overgrowth, whipple's disease, diseases with CC collagenous colitis, inflammatory bowel disease, diseases with correction of congenital heart disease, when the string intestion, e.g. congenital intestinal lymphanglectasia, correction of congenital heart disease with Fontan's operation, c.g. congenital intestinal intestinal special correction of congenital heart disease with Fontan's operation, c.g. congenital intestinal special correction of congenital heart disease with Fontan's operation, c.g. special disease, estimated by systemic lupus crythematosus or food allergies, primarily to consider the content of congenital heart disease with Fontan's operation, c.g. systemic lupus crythematosus or food allergies, primarily to
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                03-AUG-1998;
                                                                                                                                                                                                                                                                                         blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
(UYMA-) UNIV MARYLAND BALTIMORE
                                                                                          28-JUL-1999;
                                                                                                                                   17-FEB-2000
                                                                                                                                                                             WO200007609-A1
                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                           hypotensive; immunosuppressive; gastrointestinal inflammation; t
                                                                                                                                                                                                                                                                                                                                          Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antlinflammatory; cerebroprotect
                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             Peptide antagonist of zonulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y Match 100.0%;
Local Similarity 100.0%;
hes 8; Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
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Pred. No. 3.2e+05;
); Mismatches 0;
                                                                                                                                                                                                                                                                            antiparasitic; vasotropic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C(TJ). The peptide antagonists are based on a common motif of zOT CC and human zonulins, which is believed to be critical for receptor CC binding. They can be prepared by chemical synthesis or by use of CC recombinant DNA techniques. The peptide antagonists are used as an inflammation, where they bind to the zOT receptor in the intestinal cCC inflammation, where they bind to the zOT receptor in the intestinal cCC and yet does not physiologically modulate the opening of TJ in the CC increased intestinal permeability and the peptide is useful for CC treating intestinal permeability and the peptide is useful for CC crused by infection, e.g. Clostridium difficule infection, infestion, bacterial overgrowth, whipple's disease, diseases with CC infestation, bacterial overgrowth, whipple's disease, diseases with collars of conjustic obstruction, e.g. congenital intestinal lymphanisectasia, CC infestation of congenital heart disease, diseases marked by imphatic obstruction, e.g. congenital intestinal lymphanisectasia, CC infestation of congenital heart disease with Fontan's operation, collasses, without ulceration, e.g. Menetrier's disease, collasses, without ulceration, e.g. Menetrier's disease, cc e.g. systemic lupus erythematosus or food allergies, primarily to maik.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                            Zneu-1; neuro-growth factor-like protein; human; breast cancer glioblastoma; pituitary adenoma; Alzheimer's disease; therapy; nerve regeneration; haematopolesis; fertility; contraception; antibody; epidermal growth factor; EGF.
     18-JUN-1997;
                                  18-JUN-1998;
                                                                                                      W09857983-A2
                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                         Human Zneul EGF-like domain
                                                                                                                                                                                                                                                                                                                                W88384;
                                                                                                                                                                                                                                                                                                                                                             W88384 standard;
                                                                                                                                                                                                                                                                                              26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (20T) receptor, yet do no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGVCVQPG 8
||:||||
1 gglcvqpg 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         which bind to a zonula occludens toxi physiologically modulate the opening
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 46; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-205565/18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 7; Conserv
                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
97US-0878322
                                  98WO-US12763
                                                                                                                                                                                                                                                                                                                                                           Peptide; 31 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               93.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 44; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 21;
3.2e+05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 8;
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                                                                                                                                                                                                               cancer;
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Query Match
Best Local Similarity
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                              Blumberg
Whitmore
                                                                                                                                                                                                                                                                                            Zneu-1; neuro-growth factor-like protein; human; breast cancer;
glioblastoma; pituitary adenoma; Alzheimer's disease; therapy;
nerve regeneration; haematopolesis; fertility; contraception;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This peptide comprises the first epidermal growth factor-like domain (EGF-1), i.e. amino acid residues 105-135, of human Zneul (see W88381), a new neuro-growth factor-like protein. Zneul can used as a growth, maintenance, or differentiation factor in the
WPI; 1999-095324/08
                                                                                                                                                        18-JUN-1998;
                                                                                                                                                                                                                  W09857983-A2
                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                        Human Zneul partial polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                          26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                         W88389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     W88389 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         diagnostic assays.
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                                                                                                         18-JUN-1997;
18-JUN-1997;
                                                                                                                                                                                     23-DEC-1998
                                                                          (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 ggscvqpg 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGVCVQPG 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6,
                              TE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       alian Zneul polypeptides - used to, e.g. treat Alzheimer's cancer and to repopulate blood cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page
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                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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                                           Jelinek
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                                                                                                       97US-0878322.
97US-0050143.
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                                                                                                                                                      98WO-US12763.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Protein;
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87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                             Lehner JM,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 41; DB 20;
Pred. No. 4.2;
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                                          Sheppard
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Best Local S
Matches 7
                             31-MAR-1999;
02-APR-1999;
05-APR-1999;
30-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heart, spleen, testis, thyroid and lymph nodes. zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alzheimer's disease, cancer, to repopulate blood cells after chemotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to regenerate nerves. Claimed Zneul polypeptides (see also W88382-97), including specific domains of Zneul and epitope-bearing portions of Zneul, can be used to raise specific antibodies for use e.g. in
                                                                                                                                                                                                                                                                  cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; altergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                   antianaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        growth factor-like domains (see also W88384-85) of Zneul. a new neuro-growth factor-like protein that can be used as
                                                                                                                                                  05-OCT-2000
                                                                                                                                                                                   WO200058473-A2
                                                                                                                                                                                                                                                                                                                                                                                      antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
                                                                                                                                                                                                                                                                                                                                                                                                    hypotensive; dermatological; immunosuppressive; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                    Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antipparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human ORFX ORF1482 polypeptide sequence SEQ ID NO: 2964.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B41718 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diagnostic assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       growth, maintenance, or differentiation factor in the spinal cord,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This claimed polypeptide comprises amino acid residues 105-177 of the human Zneul mature protein (see W88382), i.e. the 2 epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Page 57; 70pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New mammalian Zneul disease, cancer and
                                                                                                                31-MAR-2000; 2000WO-US08621.
                                                                                                                                                                                                                   Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGVCVQPG 8
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                            99US-0127607.
99US-0127636.
99US-0127728.
2000US-0540763.
                                                                                                                                                                                                                                                    contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptides - used
to repopulate blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.2%;
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20;
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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                     Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant; immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antiinflammatory; antiartantant; antibacterial; antifungal; antiferative disorder; hypotrension; antitanaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                          Human ORFX ORF1402 polypeptide sequence SEQ ID NO:2804.
                                                                                                                                                                                                                                                                                                                                                                                                              08-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B41638 standard; Protein; 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
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19 ggscvqpg 26
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87.5%;
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Pred. No. 13;
0; Mismatches
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WO200058473-A2 Homo sapiens

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Best Local Similarity
""" or ches 7; Conserv.
                                                                                                                                                                                                                                                                                                                                                                                                                              CC C74446 to C77606 encode the proteins given in B40237 to B43397, which CC represent the human OREX open reading frames 1 to 3161. The OREX CC sequences have activities such as cytostatic; hepatotropic; vulnerary; cc antipsoriatic; antiparkinsonian; notropic; neuroprotective; osteopathic; cc anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cartiviral; immunosuppressive; antidiabetic; hypotensive; cc antiviral; immunosuppressive; antitiflammatory; antibacterial; cc antiviral; antifungal; antirheumatic; antitiflammatory; antibacterial; cc sequences can be used for determining the presence of or predisposition cc or preventing or treating pathological conditions associated with an proteins in gene therapy vectors. The proteins and nucleic acids may be cc disorders, osteoarthritis, graft vs host disease, cardiovascular disease, corage, systemic lupus crythematosus, severe combined immunodeficiency considers, asthma, allergies, aplastic anaemia, burns, wounds, bone and cc cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to xx enhance coagulation; to inhibit thrombosis; and as a contraceptive.
              Homo sapiens
                                                Zneu-1; neuro-growth factor-like protein; human; breast glioblastoma; pituitary adenoma; Alzheimer's disease; the nerve regeneration; haematopoiesis; fertility; contraces
                                                                                                                    Human Zneul
                                                                                                                                                  26-APR-1999
                                                                                                                                                                                                         W88388 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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N-PSDB; C75847.
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02-APR-1999; 99US-0127636.
05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
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                                                                                                                                                                                                                                                                                   91
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-OCT-2000
                                                                                                                                                                                                                                                                                                 1 GGVCVQPG 8
                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                  ggscvqpg
                                                                                                                                                                                                                                                                                                                                                                                                                   153
                                                                                                              partial polypeptide.
                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                  98
                                                                                                                                                                                                                                                                                                                                                                                                                   AA
                                                                                                                                                                                                        Protein;
                                                                                                                                                                                                                                                                                                                                                    87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ï
                                                                                                                                                                                                                                                                                                                                    Score 41; DB : Pred. No. 17; 0; Mismatches
                                                   fertility; contraception,
                                                                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                Length 153;
                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        frame
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                                                                                                                                                                                                                                                                                                        RESULT
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This claimed polypeptide comprises amino acid residues 1-158 of the human Zneul mature protein (see W88382), i.e. the first HSMHC3W5A homology domain and first EGF-like domain of Zneul. Zneul is a new neuro-growth factor-like protein that can be used as a growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. Zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alzheimer's disease, cancer, to repopulate blood cells after chemotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to reconstruction.
                                                                                                                                           Zneu-1; neuro-growth factor-like protein; human; brea glioblastoma; pituitary adenoma; Alzheimer's disease; nerve regeneration; haematopoiesis; fertility; contra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     regenerate nerves. Claimed Zneul polypeptides (see also W88382-97), including specific domains of Zneul and epitope-bearing portions of Zneul, can be used to raise specific antibodies for use e.g. in
 18-JUN-1997;
                        18-JUN-1998;
                                                    23-DEC-1998.
                                                                             WO9857983-A2
                                                                                                      Homo sapiens
                                                                                                                                antibody.
                                                                                                                                                                                               Human Zneul partial polypeptide.
                                                                                                                                                                                                                           26-APR-1999
                                                                                                                                                                                                                                                     WBB390;
                                                                                                                                                                                                                                                                              W88390 standard; Protein; 169 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diagnostic assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New mammalian Zneul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-095324/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JUN-1997;
18-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W09857983-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    23-DEC-1998
                                                                                                                                                                                                                                                                                                                                             || ||||||
95 ggscvqpg 102
                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                       1 GGVCVQPG 8
                                                                                                                                                                                                                                                                                                        в
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                alian Zneul polypeptides - used to, e.g. treat Alzheimer's cancer and to repopulate blood cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 158 AA
                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jelinek
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56; 70pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-0878322.
97US-0050143.
97US-0878322
                          98WO-US12763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US12763
                                                                                                                                                                                                                                                                                                                                                                                                           87.2%;
87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                             Score 41; DB
Pred. No. 17;
                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sheppard
                                                                                                                                                                                                                                                                                                                                                                                                                          20;
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                                                                                                                                                                                                                                                                                                                                                                                                                         Length 158
                                                                                                                                                                     breast
                                                                                                                                                                                                                                                                                                                                                                                                Indels
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    factor-like protein that can be used as a growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. Zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alzheimer's disease, cancer, to repopulate blood cells after chemotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to regenerate nerves. Claimed zneul polypaptides (see also W88382-97), including specific domains of zneul and epitope-bearing portions of zneul, can be used to
                       N-PSDB;
                                    WPI; 1999-591956/51
                                                                                                                                                                                                                                                                                    Human normal uterus tissue derived protein 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This claimed polypeptide comprises amino acid residues 105-273 of the human Zneul mature protein (see w88382), i.e. the 2 epidermal growth factor-like domains (see also w88384-85) and the second the MESMEG3W5A homology domain of Zneul. Zneul is a new neuro-growth factor-like domain of Zneul.
                                                              Rosenthal A,
                                                                                                                 17-APR-1998;
                                                                                                                                         17-APR-1998;
                                                                                                                                                                   21-OCT-1999.
                                                                                                                                                                                             DE19817946-A1
                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                            Human; uterus;
                                                                                                                                                                                                                                                                                                                19-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                 Y59870 standard; Protein; 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         raise specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New mammalian Zneul polypeptides - used to, e.g. treat Alzheimer's disease, cancer and to repopulate blood cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-095324/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ZYMO ) ZYMOGENETICS INC
                                                                                     (META-) METAGEN GES GENOMFORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                10
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGVCVQPG 8
                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                ggscvqpg 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 57-58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                 98DE-1017946
                                                                                                                                         98DE-1017946
                                                                                                                                                                                                                                                sequence tag.
                                                                                                                                                                                                                                                            cancer; treatment; anticancer; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         antibodies for use e.g. in diagnostic assays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0050143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87.2%;
87.5%;
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                                                            Hinzmann B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 41; DB
Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                  ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                             Schmitt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sheppard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 169
                                                            Pilarsky C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                            gene therapy;
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                                                             Dahl
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New nucleic acid sequences expressed in normal uterine tissues, and

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RESULT 10
Y52139
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CC This invention describes novel cDNA sequences (A) highly expressed in CC normal uterine tissue which can have anticancer and cytostatic activity CC and can be used for gene therapy. (A) are used (i) for recombinant CC expression of polypeptides (B) and (ii) to isolate complete genes. (C (B) are used (i) to identify agents suitable for treatment of uterine CC expression from gene therapy vectors) and (iii) for generation of CC expression from gene therapy vectors) and (iii) for generation of CC expression promains a particular tissue type before comparison of CC expression patterns. This allows a significantly longer fragment of the CC expression patterns. This allows a significantly longer fragment of the CC expression patterns. This allows a significantly longer fragment of the CC expression patterns as os should reduce the number of failures associated CC different parts of the same unknown gene, distorting the estimated CC frequency of occurrence in a particular tissue. Y59838-Y59892 represent CC protein fragments encoded by the human uterine tissue derived cDNA xx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
Y52138-Y52140 are amino acid sequences of spliced variants (T125). The T125 protein (Y52137) has two epidermal growth
                                                Example 4; Fig
                                                                              Novel polynucleotides and cellular processes -
                                                                                                                         WPI; 2000-013240/01
N-PSDB; Z37133.
                                                                                                                                                                  Holtzman DA;
                                                                                                                                                                                       (MILL-) MILLENNIUM BIOTHERAPEUTICS
                                                                                                                                                                                                                        23-APR-1998;
23-APR-1999;
                                                                                                                                                                                                                                                                 23-APR-1999;
                                                                                                                                                                                                                                                                                                                        W09954437-A2
                                                                                                                                                                                                                                                                                                                                                                              secreted protein; agonist; forensic biology.
                                                                                                                                                                                                                                                                                                                                                                                                    TANGO 125; T125; alternative splice variant;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Human TANGO 125b (T125b) amino acid sequence
                                                                                                                                                                                                                                                                                              28-OCT-1999.
                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y52139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Y52139 standard; Protein; 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 derived polypeptides, for treatment of uterine cancer and identification of therapeutic agents \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGVCVQPG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            224 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                              6; 120pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72
                                                                                                                                                                                                                     98US-0065363.
99US-0065363.
                                                                                                                                                                                                                                                              00680SD-OM66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     87
87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .5%;
                                              English
                                                                                       polypeptides used
                                                                                                                                                                                                                                                                                                                                                                                      ve splice variant; EGF domain; antibody;
antagonist; predictive medicine; treatment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ced. No. 23;
Mismatches
                                                                                                                                                                                          INC
                                                                                    to modulate a variety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 224;
 of TANGO 125
factor
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RESULT 11
W88382
ID W88382
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 87.3
Best Local Similarity 87.5
Matches 7; Conservative
                                 WPI; 1999-095324/08
                                                              Blumberg H,
Whitmore TE;
                                                                                                                             18-JUN-1997;
18-JUN-1997;
                                                                                                   (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                     18-JUN-1998;
                                                                                                                                                                                                                         WO9857983-A2
                                                                                                                                                                                                23-DEC-1998
                                                                                                                                                                                                                                                                              Domain
                                                                                                                                                                                                                                                                                                       Domain
                                                                                                                                                                                                                                                                                                                               Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                           Zneu-1; neuro-growth factor-like protein; human; breast cancer;
glioblastoma; pituitary adenoma; Alzheimer's disease; therapy;
nerve regeneration; haematopoiesis; fertility; contraception;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human neuro-growth factor-like protein Zneul mature polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (EGF)-like domains at amino acids 107-134 and 141-176 and is predicted to have a molecular weight of approximately 30kD. T125 is predicted to have rotansmembrane domains and appears to be a secreted protein. The sequences of all variants of T125 are used in the invention to create antibodies which selectively bind to T125. The T125 polypeptide is used to modulate a variety of cellular processes. It can be used to produce to identify T125 antagonists and agonists. The T125 polypucleotides, and polypeptides, homologues and antibodies can be used in screening assays; predictive medicine; and methods of treatment of T125 associated disorders. The T125 polynucleotides can be used to express the protein; to detect T125 mRNA; to detect genetic alterations in the T125 gene; in forensic biology; and as a source of primers and probes.
                                                                                                                                                                                                                                                                                                                                                                        Domain
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              W88382;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   W88382 standard; Protein; 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88 ggscvqpg 95
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        247 AA;
                                                                         Jelinek LJ,
                                                                                                                            97US-0878322.
97US-0050143.
                                                                                                                                                                    98WO-US12763.
                                                                                                                                                                                                                                                                          /note= "e
159..254
                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                      117..158
                                                                                                                                                                                                                                                                                                                                                /note= "hydrophilic domain (HSM1), homologous
                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                   'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                         __epidermal growth factor-like domain
                                                                                                                                                                                                                                                                                  "epidermal growth factor-like domain 2"
                                                                                                                                                                                                                                                         "domain_HSM2 homologous to an
                                                                                                                                                                                                                                                                                                                                           an
                                                                         Lehner
                                                                                                                                                                                                                                                                                                                                           HSMHC3W5A domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 41; DB
Pred. No. 25;
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M
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                                                                     Sheppard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                          HSMHC3W5A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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New mammalian Zneul disease, cancer and

polypeptides - used to repopulate blood

cells

treat Alzheimer's

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RESULT 12
B42204
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This polypeptide comprises human Zneul mature polypeptide. Zneul is a new neuro-growth factor-like protein (see also W88381). Its closest human homologue is HSMHC3W5A, a gene in the HLA class III region, which is contained in a cosmid which contains Notch 4.

Zneul is also homologues to Notch 4 in its EGF-like domains and may be involved in EGF receptor pathways. Zneul is widely expressed in adult tissues, with high expression in heart, placenta, spleen, testis, thyroid, spinal cord and lymph node. Zneul can be used as a growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. It may play a role in breast cancer, glioblastomas, and pituitary play a role in breast cancer, glioblastomas, and pituitary play a role in breast cancer, glioblastomas, and pituitary cancer, to repopulate blood cells after chamotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to regenerate nerves. Claimed Zneul polypeptides (see also W88382-97), including specific domains of Zneul and epitope-bearing portions of Zneul, can be used to raise specific antibodies for use e.g. in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                              31-MAR-1999;
02-APR-1999;
05-APR-1999;
                                                                                                                                                                                                                                                                                    hypotensive; dermatological; immunosuppressive; antiinflammatory; antiiviral; antibacterial; antifungal; antifheumatic; antiithyroid; antithanaemic; gene therapy; cancer; proliferative disorder; hypottension neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant; immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                                                                                                                                                                                                                                                       bone
                                                                                                       31-MAR-2000; 2000WO-US08621.
                                                                                                                                         05-OCT-2000
                                                                                                                                                                               WO200058473-A2
                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human ORFX ORF1968 polypeptide sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B42204 standard; Protein; 265 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 6; Page 48-49; 70pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
nes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGVCVQPG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ggscvqpg 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      254
                                                                                                                                                                                                                                                      contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
               2000US-0540763
                              99US-0127607.
99US-0127636.
99US-0127728.
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Pred. No. 26;
                                                                                                                                                                                                                                                                       antiinflammatory
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                                                                                                                                                                                                                                                                       disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                       coagulation;
                                                                                                                                                                                                                                                                                                                                                                                  hypertension
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RESULT 13
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Best Local
10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dermatological; immunosuppressive; antiinflammatory; antibacterial; antifural; antifungal; antirheumatic; antifuryold; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORRY-associated disorder. The nucleic acids can be used to express ORFY proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, amplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antipsoriatic; antiparkinsonian; nootropic; neuroprotective; osteopathic;
anticonvulsant; antiarthritic; immunosuppressant; immunostimulant;
cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               represent the human ORFX open reading frames 1 to 3161. The (sequences have activities such as: cytostatic; hepatotropic;
                                                                                                                                                                                                                          secreted protein;
                                                                                                                                                                                                                                                                                                                              07-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C74446 to C77606 encode the proteins given in B40237 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Page 3102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel nucleic acids and peptides derived from open reading frame X, useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease.
                                                                                               08-MAR-1999;
                                                                                                                                                               WO9946281-A2
                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                               probe;
                                                                                                                                                                                                                                                          Human;
                                                                                                                                                                                                                                                                                            Human PRO213-1 protein sequence
                                                                                                                                                                                                                                                                                                                                                            Y41769;
                                                                                                                                                                                                                                                                                                                                                                                          Y41769 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                 l6-SEP-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGVCVQPG 8
                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                           PRO; EST; expressed sequence tag; PCR primer; hybridisation; blood coagulation disorder; cancer; cellular adhesion disord
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                            (first entry)
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                98US-0077641.
98US-0077649.
                                                98US-0077450.
98US-0077632.
                                                                                               99WO-US05028
                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                              transmembrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                            273 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 41; DB Pred. No. 27; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>+</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 в43397,
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                                                                                                                                                                                                                                               disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vulnerary;
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26-MAR-1998; 27-MAR-1998; 27-MAR-1998; 27-MAR-1998; 27-MAR-1998; 27-MAR-1998;

20-MAR-1998; 20-MAR-1998; 25-MAR-1998;

13-MAR-1998; 17-MAR-1998; 20-MAR-1998; 20-MAR-1998;

98US-0078004. 98US-0040220. 98US-0078886. 98US-0078910. 98US-0078936.

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RESULT 14
Y41770
ID Y41770;
XX
AC Y41770;
XX
DT 07-DEC--
XX
DT 07-DEC--
XX
DE Human P
XX
Human;
EW Probe;
CW Probe;

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Best Local S
Matches 7
  10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
                                                                                                                         08-MAR-1999;
                                                                                                                                                                                                                                                                                                   Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disorder; secreted protein; transmembrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                Human PRO1330
                                                                                                                                                                       16-SEP-1999
                                                                                                                                                                                                                       W09946281-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                      07-DEC-1999 (first entry)
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114 ggscvqpg 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes secreted and transmembrane polypeptides and their polynucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases that may be treated include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies. 233891 to 234338, and Y41685 to Y41774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention.
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N-PSDB;
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22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
28-MAY-1998;
28-MAY-1998;
30-UUL-1998;
11-SEP-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 12; Fig 213; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New secreted and transmembrane polypeptides and their polynucleotides, useful for treating blood coagulation disorders, cancers and cellular adhesion disorders -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                  sapiens
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DB; Z34311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 87.17; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                           protein sequence
98US-0077450.
98US-0077632.
98US-0077641.
98US-0077649.
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98US-0086392
98US-0086430
98US-0086486
98US-0087908
98US-0087706
98US-0087708
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   273
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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28;
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30-MAR-1998 31-MAR-1998 31-MAR-1998 31-MAR-1998 01-APR-1998 01-APR-1998 01-APR-1998 01-APR-1998 01-APR-1998 01-APR-1998 09-APR-1998 15-APR-1998 15-APR-1998 21-APR-1998 21-APR-1998 22-APR-1998 22-APR-1998 22-APR-1998 22-APR-1998 22-APR-1998 23-APR-1998 29-APR-1998 30-APR-1998 30-APR

Baker KP,

Chen J,

their polynucleotides, cancers and cellular

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12-MAR-1998
17-MAR-1998
17-MAR-1998
20-MAR-1998
20-MAR-1998
25-MAR-1998
25-MAR-1998
27-MAR-1998
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31-MAR-1998
31-MAR
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98US-0077891
98US-0078086
98US-0079663
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Best Local Similarity 87.9
Matches 7; Conservative
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18-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
28-MAY-1998;
28-MAY-1998;
30-JUL-1998;
11-SEP-1998;
10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
                                                                                                                                                                                                                                                                                  Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disorder; secreted protein; transmembrane protein.
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                                                                                               08-MAR-1999;
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114 ggscvqpg
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useful for treating
adhesion disorders -
                                                                                                                                           16-SEP-1999
                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                               Human PRO1449 protein sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-551358/46.
N-PSDB; Z34312.
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                                                                                                                                                                                          WO9946281-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
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98US-0086023

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98US-0087108

98US-0087208

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                                                                                                                                                                                      The present invention describes secreted and transmembrane polypeptides and their polynucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases and include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies, 233891 to 234338, and 741685 to 741774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention.
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15-MAY-1998;
18-MAY-1998;
22-MAY-1998;
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30-UUL-1998;
31-SEP-1998;
                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                     Claim 12; Fig 217; 530pp; English.
                                                                                                                                                                                                                                                                                                                                                           New secreted and transmembrane polypeptides and their polynucleotides, useful for treating blood coagulation disorders, cancers and cellular adhesion disorders -
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Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, Nature 393, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; A;Title: Deciphering the biology of Mycobacterium A; Reference number: A70500; MUID:98295987
A; Accession: B70627
                                                                                                                                                                                                                                                                                                                                      R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; H. Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein Rv0263c - Mycobacterium tuberculosis (strain H37RV) C;Species: Mycobacterium tuberculosis C;Decies: Mycobacterium tuberculosis C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 21-Jul-2000 C;Accession: B70627
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R;Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Pern A; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia A;Reference number: A64720; MUID:97426617
A;Accession: E65020
A;Gene: Rv0263c
C;Superfamily: hypothetical protein HI1730
                                                                         A;Cross-references: GB:Z86089; GB:AL123456; NID:g3261711; PIDN:CAB06690.1; PID:g18501
A;Experimental source: strain H37Rv
                                                                                                    A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Molecule type: DNA A;Residues: 1-300 <COL>
A;Cross-references: GB:Z86089; GB:AL123456; NID:g3261711; PIDN:CAB06690.1; PI
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C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 08-Oct-1999
                                                C; Genetics:
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9.7;
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                                                                                                                                                                                                                                                               Whitehead, S.;
tuberculosis for
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                                                                                                                                                                                                                                                               .; Barrell, B.G. from the complete
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C;Genetics:
A;Map position: 22q13.1
A;Map position: 22q13.1
C;Superfamily: UDP-N-acetylglucosamine acyltransferase
C;Keywords: glycoprotein; glycosyltransferase; hexosyltransferase;
F;6-21/Domain: transmembrane #status predicted <TMM>
F;169-180/Region: epidermal growth factor-like
F;1199,239,257,395/Binding site: carbohydrate (Asn) (covalent) #stat
         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Comment:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: cDNA cloning, expression, and ch
A;Reference number: JN0586; MUID:93380894
A;Accession: JN0586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    beta-1,4-mannosyl-glycoprotein beta-1,4-N-acetylglucosaminyltransferase (EC N;Alternate names: beta-D-mannoside beta1,4 N-acetylglucosaminyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wht inhibitory factor-1 - human C:Species: Homo sapiens (man) C;Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text_C:Accession: A59180 R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner,
                                                                                                            Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Ihara,
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A;Residues: 1-379 <HSI5
A;Cross-references: GB:AF122922; NID:g4585369; PIDN:AAD25402.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nature 398, 431-436, 1999 ..., 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;Species: Homo sapiens (man)
;Date: 24-Feb-1994 #sequence_revision 24-Feb-1994 #text_change;Accession: JN0586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ihara, Y.; Nishikawa, A.;
Biochem. 113, 692-698, 19
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112 GGVCFKPG 119
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                                                      GGVCVQPG
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                                                                                                               Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1-531 <IHA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            enzyme catalyzes the addition of N-acetylglucosamine in betal-4 linkage
                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80.9%; ilarity 75.0%; Conservative
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                                                                                                                                  80.98;
75.08;
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85.7%;
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                                                                                                   Score 38; DB;
Pred. No. 17;
1; Mismatches
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Pred. No. 13;
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10;
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                                                                                                   ۳,
                                                                                                                                                       Length 531;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Niikawa, N.; Taniguchi,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 300;
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                                                                                             0;
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RESULT 7

S26929
Ig heavy chain V region (DP-33) - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S26929
R;Tomlinson, I.M.; Walter, G.; Marks, J.D.; Llewelyn, M.B.; Winter, G.
J. Mol. Biol. 227, 776-798, 1992
                                                                                                                                                                                                                                                                                                                                                                  C;Superfamily: UDP-N-acetylglucosamine acyltransferase C;Keywords: glycoprotein; glycosyltransferase; hexosylt r;6-21/Domain: transmembrane #status predicted <TMM> F;243,261,399/Binding site: carbohydrate (Asn) (covaler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:L39373; NID:g1008872; PIDN:AAB71422.1; PID:g1008873 A;Experimental source: liver, 129 Sv C;Comment: The action of this enzyme correlates with tissue specific functions, synthesized by mammalian cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               synthesized
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gene 164, 295-300, 19 A; Title: Cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Gene: Mgat3
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A; Residues: 1-536 <BHA>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Accession: JC4362
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  beta-1,4-mannosyl-glycoprotein beta-1,4-N-acetylglucosaminyltransferase (EC C;Species: Mus musculus (house mouse)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: GB:D10852; NID:g220821; PIDN:BAA01625.1; A; Note: sequence extracted from NCBI backbone (NCBIN:112852,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Note: sequence extracted from NCBI backbone (NCBIN:1. C; Superfamily: UDP-N-acetylglucosamine acyltransferase
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A; Residues: 1-536 <NIS>
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A;Title: Purification, cDNA cloning, and expression of UDP-N-acetyle A;Reference number: A43415; MUID:92388193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                  80.9%;
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75.0%;
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17;
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17;
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NCBIP: 112855)
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C;Species: Brachydanio rerio (zebra fish)
C;Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text.
C;Accession: B5180
R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner,
Nature 398, 431-436, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-98 <TOM>
A; Residues: 1-98 <TOM>
A; Residues: 1-98 <TOM>
A; Cross-references: EMBL: 212335; NID: g32889; PIDN: CAA78205.1; PID: g32890
C; Superfamily: immunoglobulin V region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
F; 15-98/Domain: immunoglobulin homology <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R; Hawkins, R.E.; Zhu, D.; Ovecka, M.; Winter, G.; Hamblin, T.J.; Stevenson, F.K. Bubmitted to the EMBL Data Library, March 1994 A;Description: Idiotypic vaccination against human B-cell lymphoma :rescue of va A;Reference number: S44105 A;Accession: S44111
                                                                                                                                                                                                                     A:Title: A new secreted protein that binds to Wnt proteins and inhibits their activities A:Reference number: A59180; MUID:99215557 A:Accession: B59180 A:Status: preliminary; not compared with conceptual translation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig heavy chain V-D-J region - human C;Speckes: Homo sapiens (man) C;Date: 13-Jan-1195 # Bequence_revision C;Accession: S44111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A:Title: The repertoire of human germline V(H) sequences reveals about fifty groups A:Reference number: $26885; MUID:93021117 A:Accession: $268929 A:Status: preliminary
                                                                                                                          A; Gene:
                                                                                                                                                               A; Cross-references:
                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-378 <HSI>
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A; Residues: 1-120 <HAW>
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Matches 7
                      Query Match
Best Local S
Matches 5
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                      Similarity
5; Conserv
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7; Conserv
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                        Conservative
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87.58;
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87.5%;
                                         76.6%;
                                                                                                                                                                                                                                                                                                                                                                                                     zebra fish
                    Score 36;
Pred. No.
2; Mismatc
                                                                                                                                                               NID: 94585375; PIDN: AAD25405.1;
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No.
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                      1;
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                                                                                                                                                                                                                                                                                                                      Samos, C.
                                   peptide synthase - Streptomyces coelicolor
c;Species: Streptomyces coelicolor
c;Species: Streptomyces coelicolor
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999
C;Accession: T34917
R;Oliver, K.; Harris, D.; Parkhill, J.; Barrell, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M76403; NID:g150669; PIDN:AAA25611.1; PID:g150670 C;Superfamily: glutamate dehydrogenase (NAD(P)+) C;Keywords: NAD; oxidoreductase F;106/Binding site: substrate (Lys) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    glutamate dehydrogenase (EC 1.4.1.2) - Peptostreptococcus asaccharolyticus NALIernate names: glutamic dehydrogenase; NAD-specific glutamate dehydrog C:Species: Peptostreptococcus asaccharolyticus C:Date: 16-Oct-1992 #sequence_revision 23-Mar-1995 #text_change 11-Jun-1995 C:Accession: A38168
R;Ollver, K.; Harris, D.; Parkhill, J.; Barrell, submitted to the EMBL Data Library, January 1998 A;Reference number: Z21558
                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: strain C; Genetics: A; Gene: APE2336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J. DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aero A;Reference number: A72450; MUID:99310339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypothetical protein APE2336 - Aeropyrum pernix (strain K1) C;Species: Aeropyrum pernix (c;Species: Aeropyrum pernix (c;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999 C;Accession: D72461 R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-
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D72461
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A;Experimental source: strain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-467 <KAW>
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A; Residues: 1-421 <SNE>
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J. Bacteriol. 173, 6162-6167, 1991
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Matches 5
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Matches 6; Conserv
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5; Conser
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                                                                                                                                                                                                                                                                                                                      74.5%;
75.0%;
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, S.; Funahash:
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1; Mismatches
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                                                                                                                                                                                                                                                                                                                    Score 35;
Pred. No.
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                                       B.G.;
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                                       Rajandream,
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T.; Kudoh, Y
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Yamazaki,
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A:Molecule type: mRNA
A;Residues: 1-723 <CIE>
C;Superfamily: integrin beta chain; laminin-type EGF-like homology
C;Keywords: cell adhesion; duplication; heterodimer; membrane protein
                                                                                                                                                                                                                                        Ricieutat, A.M.; Rosa, J.P.; Letourneur, F.; Poncz, M.; Rifat, S. Blochem. Blophys. Res. Commun. 193, 771-778, 1993
A:Title: A comparative analysis of cDNA-derived sequences for rat and A:Reference number: PN0509; MUID:93290675
A:Accession: PN0509
A:Status: nucleic acid sequence not shown
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                                                                                                                                                                                                                                                                                                                                                                                  integrin beta-3 chain - rat (fragment)
C;Species: Rattus norvegicus (Norvay rat)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
C;Accession: PN0509
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Blochem. Blophys. Res. Commun. 193, 771-778, 1993
A;Title: A Comparative analysis of cDNA-derived sequences for rat and mouse beta-3 integ A;Reference number: PNO509; MUID:93290675
A;Recession: PNO510
A;Status: nucleic acid sequence not shown
A;Molecule type: mRNA
A;Residues: 1-680 <CIE>
C;Superfamily: integrin beta chain; laminin-type EGF-like homology
C;Keywords: cell adhesion; duplication; heterodimer; membrane protein
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c:Species: Mus musculus (house mouse)
c:Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Accession: R; Cieutat, A
                                                                          Ouery Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: SCOEDB: SC3F7.11
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A; Residues: 1-532 <OLI>
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A; Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                   74.5%; Score 35;
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tive 0; Mismatc
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77;
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Search completed: June 13, 2001, 14:10:45 Job time: 146 sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R:Ensser, A.; Pflanz, R.; Fleckenstein, B.
J. Virol. 71, 6517-6525, 1997
A:Title: Primary structure of the alcelaphine herpesvirus 1 genome.
A;Reference number: Z14840; MUID:97404659
A;Accession: T03156
                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-780 <ENS>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ribonucleoside-diphosphate reductase (EC 1.17.4.1) large chain - alcelaphine herpesvi C;Alternate names: ribonucleotide reductase large chain C;Species: alcelaphine herpesvirus 1 C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 21-Jul-2000 C;Accession: T03156
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Best Local (
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Pred. No. 87;
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Perfect score:
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Gapop 10.0 , Gapext 0.5
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DH22_PEPAS
ITB3_MOUSE
AMPM_SALTY
STHA_MYCTU
CCH4_DUNSA
ITB3_HUMAN
EF2_BLAHO
HV3O_HUMAN
EF2_BLAHO
HV3O_HUMAN
L12B_AEIN
MC4R_RAT
TEL2_HUMAN
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Q14181
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P41794 salmonella
Q9y5w5 homo sapien
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T neurospora
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I mus musculu
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2 gallus gall
homo sapien
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3 saccharomyce
2 mycobacteri
2 dunaliella
6 homo sapien
2 blastocysti
8 homo sapien
4 haemophilus
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Best Local Similarity

Matches 6; Conserv
1 GGVCVQPG 8
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229 GGSCMQPG 236
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Result No.

Conservative

80.9%; 75.0%;

; Score 38; DB; Pred. No. 5.4; 1; Mismatches

DB 1; 5.4;

Length 278; Indels

0

Gaps

0;

35 32 68.1 441 NFIX_MOUSE  36 32 68.1 509 NFIL_RAT  36 32 68.1 509 NFIL_RAT  37 68.1 573 1 ERGI_RAT  38 32 68.1 1813 1 DRPL_HAM  39 68.1 1813 1 DRPL_HAM  40 32 68.1 1818 1 NFIX_MOUSE  41 31 66.0 91 1748H_RITS  42 31 66.0 91 1748H_RITS  43 31 66.0 91 1 YEAL_RATS  44 31 66.0 114 1 PER_DROCK  45 31 66.0 114 1 PER_DROCK  46 31 1818 1 NFIX_MOUSE  ALIGNMENTS  ALIGNMENTS	222222222222222	C C R R R R R R R R R R R R R R R R R R	RRRRRRROCCOS GEODT	RESU EUTJ ID:	
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E P70257 P09414 R P17923 P17923 P17920 A P52020 A P54259 P44258 P54259 R P54259 P P65375 N P55375 N P55375 N P626287 P P75375 N P	SS-PROT entry is copyrig the Swiss Institute of pean Bioinformatics Inst non-profit institution and this statement is n requires a license agre an email to license@isb- 00033; AAC75507.1; - 0874; BAAL6332.1; - EG14184; eutJ. EG14184; eutJ. 278 AA; 30082 MW; 8	Shao Y.  K1297).  Shaba T.  Fujita K.  Hay:  DK.  Kim S.  Kimura S.  S.  Miki T.  Mizobuchi K.  S.  Mixi T.  Mizobuchi K.  S.  Mixi T.  Mixobuchi K.  S.  H.  Takemoto Y.  H.  Takemoto K.  H.  Hay:  Hay:  DCO  Color C.  Shaba T.  Shab	-1997 (Rel. 35, Leaced) -1997 (Rel. 35, Last seque -2000 (Rel. 40, Last annot LAMINE UTILIZATION PROTEIN ichia coli. la: Proteobacteria; gamma iphia. proteobacteria; gamma iphia. 2E FROM N.A. 2E FROM N.A. 3. Collado-Vides J., Glas J., Davis N.W., Kirkpatti J., Davis N.W., Kirkpatti	OLI STANDARD; P	68.1 441 1 2 68.1 509 1 2 68.1 522 1 2 68.1 573 1 2 68.1 1687 1 2 68.1 1185 1 2 68.1 1185 1 2 68.1 2318 1 2 68.0 91 1 1 66.0 91 1 1 66.0 130 1
	t is produced through a co formatics and the EMBL c There are no restricti long as its content is moved. Usage by and for (See http://www.isb-sib.c h).	richia coli K-12.";  Honjo A., Horiuchi S., Itoh T., Kanai K. awa M., Kitakawa M., H., Motomura K., Nak ito N., Sampei G., Se oto Y., Yano M.; nk/DDBJ databases.	pdate) update) . vision; Enterobacteriaceae; vis., Perna N.T., Burland .D., Rode C.K., Mayhew G.F.	GNMENTS 278 AA.	P70257 P09414 K P17923 P52020 A P52020 A P54259 P Q61982 P Q6289 P Q26289 P 026289

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RESULTATION OF THE PROPERTY OF
          RESULT 3
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Matches 6
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WIF1.
HOMO Sapiens (Human).
Homo sapiens (Human).
""karyota; Metazoa; Chordata; C;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a control of the European Bioinformatics and the EMBL use by non-profit institute. There are no restrict modified and this statement is not removed. Usage by and fo or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U18560; AAA80210.1;
EMBL; AF093749; AAC78119.1
StyGene; SG10554; eutJ.
SEQUENCE 279 AA; 30018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-99395039; PubMed-10464203; Rofold E.C., Rappleye C.A., Stojlijkovic I., Roth J.R.; "The 17-gene ethanolamine (eul) operon of Salmonella typhimurium encodes five homologues of Carboxysome shell proteins."; Bacteriol. 181:5317-5329(1999).

1- PATHWAN: ETHANOLAMINE UTILIZATION.
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STRAIN-APTCC 14028s;

MEDLINE-95173114; PubMed-7868611;

StOj11/Kovic I., Baeumler A.J., Heffron F.;

"Ethanolamine utilization in Salmonella typhimurium: nucleotide sequence, protein expression, and mutational analysis of the cchB eutE eutJ eutG eutH gene cluster.";

J. Bacteriol. 177:1357-1366(1995).
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6; Conser
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PubMed=10201374;
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Pred. No. 5.4;
1; Mismatches
                                                                                Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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PROSITE; PRODUZ2; EGF-1; 5.
PROSITE; PSO1186; EGF-2; 4.
Repeat; EGF-11ke domain; Signa SIGNAL 177 208
PCHAIN 299 379 WHOMAIN 241 272 EGF DOMAIN 273 304 EGF DOMAIN 305 336 EGF DOMAIN 305 336 EGF DOMAIN 305 336 EGF DOMAIN 273 304 EGF DOMAIN 305 336 EGF DOMAIN 305 324 POUT DISULFID 209 218 POUT DISULFID 209 224 POUT DISULFID 246 256 POUT DISULFID 246 256 POUT DISULFID 273 282 POUT DISULFID 273 282 POUT DISULFID 273 282 POUT DISULFID 294 296 POUT DISULFID 305 314 POUT DISULFID 305 314 POUT DISULFID 326 328 POUT DISULFID 326 AUT D
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SEQUENCE
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Smallwood P.M., Samos C.H., Nu.
"A new secreted protein that b
activities.";
Nature 398:431-436(1999).
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                                -OCT-2000 (Rel. 40, OCT-2000 (Re
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                                                                                                                                                                                                                      STANDARD;
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M., Samos C.H., Nusse R., Dawid
ted protein that binds to Wnt pr
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Signal;
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Pred. No. 7.1;
1; Mismatches
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EGF-LIKE 1.
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N-LINKED (GLCNAC. . .) (POTENTIAL).
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I.B., Nathans
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SIGNAL
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Smallwood P.M., Samos C.H., Nusse F
"A new secreted protein that binds
activities.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PRO0011; EGFLAMININ. PROSITE; PS00022; EGF_1; 5. PROSITE; PS01186; EGF_2; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MGD; MGI:1344332; Wifl.
InterPro; IPR000561; -.
InterPro; IPR002049; -.
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-1- SIMILARITY: CONTAINS 5 EGF-LIKE DOMAINS.
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                                         GGVCVQPG 8
  GGLCVTPG 228
                                                                                                        Similarity
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                                                                                      Conservative
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I.B., Nathans
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and inhibits
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Q09327;
01-NOV-1995
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01-NOV-1995 (Rel. 32, Last sequence update)
01-CT-1995 (Rel. 34, Last annotation update)
01-CT-1996 (Rel. 34, Last annotation update)
BETA-1,4-MANNOSYL-GLYCOPROTEIN BETA-1,4-N-ACETYLGLUCOSAMINYL-
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-CLIGOSACCHARIDE-GLYCOPROTEIN
N-ACETYLGLUCOSAMINYLTRANSFERASE III) (N-ACETYLGLUCOSAMINYLTRANSFERASE
III) (GNT-III) (GLCNAC-T III).
                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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"CDNA Cloning, expression, and chromosomal localization
acetylglucosaminyltransferase III (GnT-III).";
J. Biochem. 113:692-698(1993).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                       EMBL; D13789; BAA02937.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: IT IS INVÓLVED IN THE REGULATION OF THE BIOSYNTHESIS AN BIOLOGICAL FUNCTION OF GLYCOPROTEIN OLIGOSACCHARIDES. CATALYZES THE ADDITION OF N-ACETYLGUCOSAMINE IN BETA 1-4 LINKAGE TO THE BETA-LINKED MANNOSE OF THE TRIMANNOSYL CORE OF N-LINKED SUGAR CHAINS. IT IS ONE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE REGULATION OF THE BIOSYNTHESIS OF GLYCOPROTEIN OLIGOSACHARIDES. CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLUCOSAMINE + N-ACETYL-BETA-D-CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLUCOSAMINE + N-ACETYL-BETA-D-
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604621;
GGVCFKPG
                               GGVCVQPG
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                                                             Similarity 6; Conserv
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139
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                                                               Conservative
                                                                                                                                                                                                                                                                                                     Glycosyltransferase; Transmembrane; Signal-anchor;
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                                                                                                                                          LUMENAL, CATALYTIC (POTH
PRO-RICH.
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
ED657ECC006FCA2D CRC64
                                                           Score 38; DB 1
Pred. No. 9.5;
1; Mismatches
                                                                                                                                                                                                                                       SIGNAL-ANCHOR (TYPE-II MEMBRANE PROTEIN). LUMENAL, CATALYTIC (POTENTIAL).
                                                                                                                                                                                                                                                                        CYTOPLASMIC (POTENTIAL).
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                                                                                           Length 531;
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                                                                                                                                                                                                         (POTENTIAL)
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                                                                                                                                                                         (POTENTIAL)
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of human N-
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                                                               Gaps
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GNT3_MOUSE
ID GNT3_MOUSE
ID GNT3_MA
AC 010470
AC 010470
DT 01-0CT
DT 15-JUL
DE BETA-1
DE WAGNT3.
OS MUS MUS
CO MUS MUS
REDLIN
RX MEDLIN

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RY "Isolation, characterization and inactivation of the mouse Mgat3 gene:
RT the bisecting N-acetylglucosamine in asparagine-linked
RT oligosaccharides appears dispensable for viability and reproduction.";
RI Glycobiology 7:45-56(1997),
CC -1-FUNCTION: IT IS INVLYED IN THE REGULATION OF THE BIOSYNTHESIS AND
CC BIOLOGICAL FUNCTION OF GLYCOPROTEIN OLIGOSACCHARIDES, CATALYZES
CC THE ADDITION OF N-A:ETYLGLUCOSAMINE IN BETA 1-4 LINKAGE TO THE
CC BETA-LINKED MANNOSE OF THE TRIMANNOSYL CORE OF N-LINKED SUGAR
CC CHAINS. IT IS ONE O? THE MOST IMPORTANT ENZYMES INVOLVED IN THE
CC CHAINS. IT IS ONE O? THE MOST IMPORTANT ENZYMES INVOLVED IN THE
CC REGULATION OF THE BIOSYNTHESIS OF GLYCOPROTEIN OLIGOSACCHARIDES.
CC CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLUCOSAMINE + N-ACETYL-BETA-D-
CC GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 3-(N-ACETYL-BETA-D-FRANNOSYL-1, 4-N-
CC ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 6)-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC D-MANNOSYL-1, 6)-(N-CETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC D-MANNOSYL-1, 6)-(N-CETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 4-N-ACETYL-BETA-D-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D-
CC MANNOSYL-1, 6-N-ACETYL-BETA-D
                                    CARBOHYD
CARBOHYD
CARBOHYD
VARIANT
                                                                                                                                                                                                                                                             Glycoprot
DOMAIN
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MGD; MGI:104532; Mgat3.
                                                                                                                                                                                                                                                                                                                     Transferase; Glycosyltransferase;
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EMBL; U66844; AAC53064.1; ALT_INIT.
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or send an
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Q10470; P703
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=129/SVJ; TISSUE=Liver;
STRAIN=97214999; PubMed=9061154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1996 (Rel. 34, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
BETA-1,4-NANNOSYL-GLYCOFROTEIN BETA-1,4-N-ACETYLGLUCOSAMINYL-
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOFROTEIN
N-ACETYLGLUCOSAMINYLTRINSFERASE III) (N-ACETYLGLUCOSAMINYLTRANSFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=129/SV; TISSUE=Liver; MEDLINE=96069598; PubMed=7590346;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Roćentia; Sclurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Cloning and chromosomal mapping of the mouse acetylglucosaminyltransferase III.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bhaumik M., Seldin M.F., Stanley P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PATHWAY: GLYCOSYLATION.
SUBCELLULAR LOCATION: TYPE II MEMBRANE PROTEIN. GOLGI.
TISSUE SPECIFICITY: HIGHLY EXPRESSED IN BRAIN AND KIDNEY AND
MUCH LESSER EXTENT ::N STOMACH, HEART, INTESTINE, UTERUS, TEST
OVARY AND LUNG. NOT PRESENT IN SPLEEN, LIVER AND MUSCLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GNT-III) (GLCNAC-T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P70386;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 requires a license agreement (See http://www.isb-sib.an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          non-profit institutions as long and this statement is not removed.
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N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
N-LINKED (GLCNAC...
1 -> V (IN 129/SVJ).
D -> G (IN 129/SVJ).
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LUMENAL, CATALYTIC
PRO-RICH.
                                                                                                                                                                                                                                                      CYTOPLASMIC
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                                                                                                                                                                                                           (POTENTIAL).
DR (TYPE-II MEMBRANE PROTEIN).
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RESULT
GNT3_R
                                                                                                                                                                                                                                                                                                                                                RT beta-1,4N-accylglucosaminyltransferase III from rat kidney.";

J. Biol. Chem. 267:18199-18204(1992).

C. -!- FUNCTION: IT IS INVOLVED IN THE REGULATION OF THE BIOSYNTHESIS AND BIOLOGICAL FUNCTION OF GLYCOPROTEIN OLIGOSACCHARIDES. CATALYZES THE ADDITION OF N-ACCTYLCLUCOSAMINE IN BETA 1-4 LINKAGE TO THE GETA-LINKED MANNOSE OF THE TRIMANNOSYL CORE OF N-LINKED SUGAR.

C. CHAINS. IT IS ONE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE CHAINS. IT IS ONE OF THE MOST INFORTANT ENZYMES INVOLVED IN THE CHAINS. IT IS ONE OF THE MOST INFORTANT ENZYMES INVOLVED IN THE CHAINS. IT IS ONE OF THE MOST INFORTANT ENZYMES INVOLVED IN THE CHAINS. IT IS ONE OF THE MOST INFORTANT ENZYMES INVOLVED IN THE CHAINS. IT IS ONE OF THE MOSTUTION OF GLYCOPROTEIN OLIGOSACCHARIDES.

C. --- CATALYTIC ACTIVITY: UDP-N-ACCTYL-BETA-D-MANNOSYL-1, 3-(N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 5)-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 5-(N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-GLUCOSAMINYL-1, 2-ALPHA-D-GLUCOSAMINYL-1, 2-ALPHA-D-GLUCOSAMINYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-GLUCOSAMINYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 4-N-ACETYL-BETA-D-
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                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                      EMBL;
PIR; /
      DOMAIN
                                         Glycoprotein;
DOMAIN
                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib.ch/announce, or send an email to license@isb-sib.ch).
                         TRANSMEM
                                                                                   Transferase;
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Q02527;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-OT-1996 (Rel. 34, Last annotation update)
01-OT-1996 (Rel. 34, Last annotation update)
BETA-1,4-MANNOSYL-GLYCOPROTEIN BETA-1,4-N-ACETYLGLUCOSAMINYL-
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOPROTEIN
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOPROTEIN
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOPROTEIN
TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSAMINYLTRANSFERASE
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UDP-N-acetylglucosamine: beta-D-mannoside
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=92388193; PubMed=1325461;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   III) (GNT-III) (GLCNAC-T III).
MGAT3 OR GNT3.
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                                                                                                                    D10852;
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  ; Golgi stack.

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                                                                             Glycosyltransferase;
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                CYTOPLASMIC (POTENTIAL). SIGNAL-ANCHOR (TYPE-II »
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                                                                           Transmembrane;
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ssion of
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(POTENTIAL)
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Snedecor B., Chu H., Chen E.Y.;

Selection, expression, and nucleotide sequencing of the glutamate dehydrogenase gene of Peptostreptococcus asaccharolyticus.";

J. Bacteriol. 173:6162-6167(1991).

-I - CATALYTIC ACTIVITY: L-GLUTAMATE + H(2)O + NAD(+) = 2-OXOGLUTARI + NH(3) + NADH.

-I - PATHWAY: FIRST STEP IN THE HYDROXYGLUTARATE PATHWAY (ROUTE FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
01-OCT-1996 (Rel. 34, Last annotation update)
01-DECIFIC GLUTAMATE DEHYDROGENASE (EC 1.4.1.2) (NAD-GDH).
Peptostreptococcus asaccharolyticus (Peptococcus asaccharolyticus).
Bacteria; Firmicutes; Bacillus/Clostridium group; Clostridiaceae;
                                                                                                                                                                                                                                                                                                       Oxidoreductase; NAD. ACT_SITE 106 1
                                                                                                                                                                                                                                                                                                                                          Pfam; PF00208; GLFV_dehydrog; PRINTS; PR00082; GLFDHDRGNASE PROSITE; PS00074; GLFV_DEHYDRG
                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; M76403; AAA25611.1;
PIR; A38168; A38168.
HSSP; P80319; 1GTM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE-92011378; Pubmed-1917850;
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P28997;
                                                                                                                                                                                                                                                                                 SEQUENCE
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Pfam; PF00208;
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NCBI_TaxID=1258;
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SUBUNIT: HOMOHEXAMER.
SIMILARITY: BELONGS TO THE GLU/LEU/PHE/VAL DEHYDROGENASES
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5; Conser
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Similarity 75.0%;
6; Conservative
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61762
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1; Mismatches
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N-LINKED (GLCNAC. . .) (PO'
N-B1817BEB6C307438 CRC64;
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Pred. No.
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15-UCL-1999 (Rel. 38
PLATELET MEMBRANE GL)
3) (CD61).
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054890;
15-DEC-1998
15-DEC-1998
15-JUL-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MCHUGH K.P., Teitelbaum S.L., Kitazawa S., Ross F.P.;
Submitted (SEP-1997) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: PLATELET MEMBRANE GLYCOPOOTBIN IIB-IIIA IS
RECEPTOR FOR ADHESIVE PROTEINS. IT BINDS FIBRINGEN,
VITRONECTIN AND VWF. INTEGRINS RECOGNIZE THE SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00243; INTEGRIN_BETA; 3.
PROSITE; PS0022; EGF_1; UNKNOWN_2.
PROSITE; PS01186; EGF_2; UNKNOWN_1.
Integrin; Cell adhesion; Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
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InterPro; IPR001169;
InterPro; IPR002369;
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-!- SIMILARITY:
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SUBUNIT: DIMER OF AN ALPHA AND BETA S
ASSOCIATED WITH ALPHA-IIB (GPIIB) OR
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37, Last sequence update)
38, Last annotation update)
GLYCOPROTEIN IIIA PRECURSOR
    Chordata;
Rodentia;
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IV.
BY SIMILARITY.
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CYSTEINE-RICH
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RESULT AMPMUSITE REPORT OF THE PROPERTY OF THE
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the Euro
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Bur. J. Blochem. 180:23-32/1989\
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"Purification and characterization of a methioning of the control of the c
                                                                                                                                                                                                                                                                                                                                 EUR. J. Biochem. 180:23-32(1989)
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01-NOV-1991 (Rel. 20, Last
30-MAY-2000 (Rel. 39, Last
METHIONINE AMINOPEPTIDASE (
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                  s SWISS-PROT entry is copyright. It is produced ween the Swiss Institute of Bioinformatics and European Bioinformatics Institute. There are by non-profit institutions as long as its companies.
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N.R., Semon D., Meyer C., Kawashima
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InterPro; IPR000994;
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InterPro; IPR002467;
Pfam; PF00557; Peptidase_M24; 1
PRINTS; PR00599; MAPEPTIDASE.
PROSITE; PS00680; MAP_1; 1
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P09397;
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01-AUG-1992
01-NOV-1997
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INIT MET 0 0
METAL 96 96
METAL 107 107
METAL 170 170
METAL 203 203
                                                                                                                                               Mansouri K., Piepersberg W.; "Genetics of streptomycin production in Streptomyces griseus: nucleotide sequence of five genes, strFGHIK, including a phos
                                                                                                                                             nucleotide gene.";
                                                                                                                                                                                     STRAIN=N2-3-11;
MEDLINE=91375432;
                                                                                                                                                                                                                           Streptomyces griseus.
Bacteria; Firmicutes; Actinobacter Actinomycetales; Streptomycineae; NCBI_TaxID=1911;
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PIR; S03562; S03562.
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                                                                                         PATHWAY: STREPTO, SIMILARITY: LOW,
                                                                               PHOSPHATE ISOMERASE.
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(Rel. 23, Last sequence update)
(Rel. 35, Last annotation update)
N BIOSYNTHESIS PROTEIN STRF.
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EMBL; 235819; CAA84878.1; -
PIR; S39830; S39830.
PIR; S37331; S37331.
SGD; S0000154; SHP1.
InterPro; IPR001012; -
Pfam; PF00789; UBX; 1.
SEQUENCE 423 AA; 46987 M
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01-FEB-1994
01-NOV-1995
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"The Saccharomyces SHP1 gene, which encodes a regulator of phosphoprotein phosphatase 1 with differential effects on glycogen metabolism, meiotic differentiation, and mitotic cell cycle progression.";
                                                                                                                                                                                                             use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIINE-94205266; PubMed-8154187; Scherens B., el Bakkoury M., Vierendeels F., Dubois E., Messenguy F.; Scherens B., el Bakkoury M., Vierendeels F., Dubois E., Messenguy F.; "Sequencing and functional analysis of a 32,560 bp segment on the left arm of yeast chromosome II. Identification of 26 open reading frames, including the KIP1 and SEC17 genes."; "Yeast 9:1355-1371(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
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                                                                                                                                 72.3%;
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              MEDLINE-87165991;
Fitzgerald L.A.,
                                                       Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
MCBI_TaxID=9606;
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                                                                                                   ITGB3 OR
                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as its content modified and this statement is not removed. Usage by and entitles requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
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P54212;
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MEDLINE-96279304; PubMed-8663366;

MEDLINE-96279304; PubMed-8663366;

MEDLINE-96279304; PubMed-8663366;

Membrane carbonic
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Biol. Chem. 271:17718-17723(1996).

FUNCTION: REVERSIBLE HYDRATATION OF CATALYTIC ACTYLTY: H(2)CO(3) - CO(2)

INDUCTION: BY SALT.
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"The human platelet alloantigens, PlA1 and pla
a leucine33/proline33 amino acid polymorphism
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J. Clin. Invest. 83:1778-1781(1989).
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VARIANT HPA-4
                                                                                                              VARIANT HPA-1 (PL(A)).
MEDLINE=89214713; PubMed=2565345;
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"The genomic organization of platelet glycoprotein J. Biol. Chem. 265:8590-8595(1990).
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MEDLINE=91009291; PubMed=2142280;

Lanza F., Kieffer N., Philips D.R., Fitzgerald L.A.;

"Characterization of the human platelet glycoprotein IIIa gene.

Comparison with the fibronectin receptor beta-subunit gene.";

Biol. Chem. 265:18098-18103(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               different membrane receptors.";
J. Clin. Invest. 81:1470-1475(1988).
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Marguerie G.;
"GPIIb and GPIIIa
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Mol. Biol. Rep. 14:2
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                                                                                                                                                                                                                                                                                           wa A. Matsukage A., Shiku H., 1 fication and partial amino acid ane glycoproteins IIb and IIIa. 69:560-564(1987).
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an R., Vilaire G
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G., Thevenon D.,
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Loftus J.C.
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"Single point mutation in human glycoprotein IIIa is ass a new platelet-specific alloantigen (Mo) involved in neo. alloimmune thrombocytopenia.";
Blood 81:70-76(1993).
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Ginsberg M.H.;
"A beta 3 integrin mutation abolishes ligand "A beta 3 integrin mutation abolishes ligand";
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MEDLINE-94179229; PubMed-8132570;
MEDLINE-94179229; PubMed-8132570;
Santoso S., Kalb R., Kroll H., Walka
Mueller-Eckhardt C., Newman P.J.;
"A point mutation leads to an unpaire"
"A point mutation leads to an unpaire"
                                                                                                                                                                                                                                                                                                                                                         "A new variant of Glanzmann's thrombasthenia (Strasbourg Platelets with functionally defective glycoprotein IIb-II and a glycoprotein IIIa 214Arg-->214Trp mutation.";
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J. Biol. Chem
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Bajt M.L., Ginsberg M.H., Frelinger
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J. Clin. Invest. 90:2038-2043(1992).
                 "Inherited disearapid molecular
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Lanza F., Stierle A., Fournier D.,
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MEDLINE-95184171; PubMed-7878622;
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Biochem. Biophys. Res. Commun. 251:763-768(1998).
-!- FUNCTION: PLATELET MEMBRANE GLYCOPROTEIN IIB-IIIA IS RECEPTOR FOR ADHESIVE PROTEINS. IT BINDS FIBRINGEN, VITRONECTIN AND VWF. INTEGRINS RECOGNIZE THE SEQUENCY
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BOLYMORPHISM: POSITION 59 IS ASSOCIATED WITH PLATELET-SPECIFIC ALLOANTIGEN HPA-1 (2W OR PL(A)). HPA-1A/PL(A1) HAS LEU-59 AND HPA-1B/PL(A2) HAS PRO-59.

BOLYMORPHISM: POSITION 169 IS ASSOCIATED WITH PLATELET-SPECIFIC ALLOANTIGEN HPA-4 (PEN OR YUK). HPA-4A/PEN(A)/YUK(A) HAS ARG-169 AND HPA-4B/PEN(B)/YUK(B) HAS GLN-169. HPA-4B IS INVOLVED IN MEONATAL ALLOIMMUME THROMBOCYTOPENIA (NATP).

POLYMORPHISM: POSITION 433 IS ASSOCIATED WITH PLATELET-SPECIFIC ALLOANTIGEN MO. MO(-) HAS PRO-433 AND MO(+) HAS ALA-433. MO(+) INVOLVED IN NATP.
                                                                                                                                                                                                 POLYMORPHISM: POSITION 515 IS ASSOCIATED WITH PLATELET-SPEC ALLOANTIGEN CA (TU). CA(-)/TU(-) HAS ARG-515 AND CA(1)/TU(+ GLN-515. CA(+) IS INVOLVED NATP. DISEASE: DEFECTS IN ITGBY ARE ONE OF THE CAUSE OF GLANZMANN THROMBASTHENIA (GTA), AN AUTOSOMAL RECESSIVE DISORDER WHICH THE MOST COMMON INHERITED DISEASE OF PLATELETS. GTA IS
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ASSOCIATED WITH ALPHA-IIB (GPIIB) OR
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ALTERNATIVE PRODUCTS: THE DIFFERENT FORMS OF A
ARISE BY ALTERNATIVE SPLICING OF PRIMARY MRNA TRANSCRIPTS.
PTM: THE CYSTEINE RESIDUES ARE INVOLVED IN INTRACHAIN DISULFIDE
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M., Takada Y., Watanabe K., Ikeda Y.;
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34	34	34	34	34	34	34	34	34	34	34	35	<b>3</b> 5	<u>3</u> 5	35	35	35 5	35	35	35	35	35	35	35	35	35
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Q10923	Q9NKE2	Q25494	Q25496	Q54257	Q9VEH2	033515	Q9W3G5	Q9PK45	084353	026242	09VJU8	Q66663	036411	Q9QW16	Q9QW15	054154	Q9P0W5	Q9P0W3	Q9Y9F2	Q9NKEO	Q25491	Q25526	075543	Q9JLR0	<b>Д</b> 9хнv8
Q10923 caenorhabdi	Q9nke2 drosophila	Q25494 manduca sex						Q9pk45 chlamydia m	084353 chlamydia t	O26242 methanobact	a		O36411 alcelaphine		Q9qw15 mus sp. bet	054154 streptomyce			Q9y9f2 aeropyrum p	<ul> <li>Q9nke0 drosophila</li> </ul>	Q25491 manduca sex	Q25526 manduca sex	075543 homo sapien	Q9jlr0 mus musculu	Q9xhv8 oryza sativ

## ALIGNMENTS

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RESULT
075851
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Q9UHF1
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                                                                                      Query Match
Best Local Similarity
~+~hes 7; Conserva
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                                                                                                                                                            INTERPRO; IPRO00152; -.

INTERPRO; IPRO00561; -.

INTERPRO; IPRO01881; -.

INTERPRO; IPRO01881; -.

PFAM; PF00008; EGF; 2.

PROSITE; PS00010; ASX_HYDROXYL; 1.

PROSITE; PS000022; EGF_1; UNKNOWN_1.

PROSITE; PS001186; EGF_2; UNKNOWN_1.

PROSITE; PS01187; EGF_CA; 1.

PROSITE; PS01187; EGF_CA; 1.

SEQUENCE 273 AA; 29617 MW; 5740BB8
                                                                                                                                                                                                                                                                                                                                                                                                                                  O9UHF1;
O1-MAY-2000 (TrEMBLrel. 1
O1-MAY-2000 (TrEMBLrel. 1
O1-CCT-2000 (TrEMBLrel. 1
NOTCH4-LIKE PROTEIN.
                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
Sheppard P., Jelinek L., Whitmore T., Blumberg H., Lehner J., O'Hara P.;
Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF186111; AAF01429.1; -.
EMBL; P3555; LEMN.
                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                       ZNEU1.
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                                                  114 GGSCVQPG 121
                                                                        1 GGVCVQPG 8
             N
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87.5%;
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13,
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Last sequence update)
Last annotation update)
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                                                                                                               Score 41; DB 4; Length 273; Pred. No. 3.8;
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                                                                                                                                                                5740BB845ED5A988 CRC64;
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Best Local
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PROSITE; PSO0022; EGF_1; UNKNOWN_1.

PROSITE; PSO0025; CRYSTALLIN_BETAGAMMA; UNK

PROSITE; PSO0225; CRYSTALLIN_BETAGAMMA; UNK

PROSITE; PSO0280; BPT_KUNITZ; UNKNOWN_1.

PROSITE; PSO0340; RECEPTOR_CYTOKINES_2; UNK

PROSITE; PSO1209; LDLRA_1; 9.

PROSITE; PSO068; LDLRA_2; 20.
                                                                                                                                                                                                                                                                                                                          INTERPRO; IPR002172; ...
INTERPRO; IPR002223; ...
INTERPRO; IPR002245; ...
INTERPRO; IPR002245; ...
INTERPRO; IPR002919; ...
PFAM; PF00057; ldl_recept_a; l1.
PFAM; PF00094; tsp_1; l4.
PFAM; PF00094; vwd; 5.
PFAM; PF00094; F5_F8_type_C; l.
PFAM; PF00754; F5_F8_type_C; l.
                 01-MAY-1997 (TIEMBLIEL 03, Created)
01-MAY-1997 (TIEMBLIEL 03, Last sequence update)
01-JUN-2000 (TIEMBLIEL 14, Last annotation updath
HYPOTHETICAL 32, Z KDA PROTEIN.
RV0263C OR MICY06A4.07C
                                                                                                                                                                                                                    Glycoprotein.
NON_TER
SEQUENCE 412
                                                          P95220;
01-MAY-1997
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HSSP; PO1130; 1A.0
INTERPRO; IPRO00:
INTERPRO; IPRO00:
INTERPRO; IPRO00:
INTERPRO; IPRO01:
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075851;
01-NOV-1998
01-NOV-1998
01-OCT-2000
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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Submitted (SEP-1998)
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Leonard S., Graves T.,
The sequence of Homo
                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (JUN-1998)
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                                                                                                                                                GGVCVQPG 8
                                                                                                                                                                    Similarity 6; Conserv
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                                                                           PRELIMINARY;
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434985 MW;
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Primates;
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to the EMBL/GenBank/DDBJ
                                                                                                                                                                            . 18;
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raniens PAC clone DJ0751H13.
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                                                                                                                                                               Score 40; DB Pred. No. 76; 1; Mismatches
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Last annotal
(FRAGMENT).
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THE REPORT OF THE PROPERTY OF 
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Q9W6F8
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Best Local S
Matches 6
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Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris D. A. Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekala F., Radcock K., Basham D., Brown D., Chillingworth T., Connor R., Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd S. A. Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., A. Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., A. Rutter S., Geoger K., Skelton S., Squares S., Sqares R., Sulston J.E. Taylor K., Whitehead S., Barrell B.G.; "Deciphering the biology of Mycobacterium tuberculosis from the Complete genome sequence.";

Nature 393:537-544(1998).

Reminsproud T., 286089; CAB06690.1; -.
PRINTS: PRO0011; EGFLAMININ.

PROSITE; PS001022; EGF_1; UNKNOWN_5.

PROSITE; PS01186; EGF_2; 5:

REPEAT; EGF-11ke domain; Signal; Developmental SIGNAL 1 28

POTENTIAL.
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Q9W6F8;
01-NOV-1999
                                                                                                                                                 INTERPRO; IPR000561; -.
INTERPRO; IPR002049; -.
PFAM; PF00008; EGF; 5.
                                                                                                                                                                                                                                     -!- DEVELOPMENTAL STAGE:
-!- SIMILARITY: CONTAINS
EMBL; AF122924; AAD25404.
HSSP; P00740; 1EDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "A new secreted protein t activities.";
Nature 398:431-436(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

MEDLINE-99215557; PubMed=10201374;

Hsieh J.-C., Kodjabachian L., Rebbert M.L.,

Smallwood P.M., Samos C.H., Nusse R., Dawid

"A new secreted protein that binds to Wnt pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
WNT INHIBITORY FACTOR 1 PRECURSOR (WNT INHIBITORY F
WIF1 OR WIF-1.
Xenopus laevis (African clawed frog).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TUBERCULIST; Rv0263c; -.
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Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetalae; Corynebacterineae; Mycobacteriaceae; M
NCBI_TaxID=1773;
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                                                                                                                                                                                                                                              FUNCTION: BINDS TO WAY PROTEINS AND INHIBITS
BE INVOLVED IN MESODERM SEGMENTATION.
TISSUE SPECIFICITY: DURING SOMATOGENESIS, EXP
IN UNSEGMENTED PARAXIAL PRESOMITIC MESODERM A
EXTENT, IN NEWLY SEGMENTED SOMITES.
DEVELOPMENTAL STRAGE: FIRST EXPRESSED AT NEURU
SIMILARITY: CONTAINS 5 EGF-LIKE DOMAINS.
SIMILARITY: CONTAINS 5 EGF-LIKE DOMAINS.
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.300 AA; 32203 MW;
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inhibits
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A MUCH LESSER
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Gaps

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Matches 6
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Q9Y5W5;
Q1-NOV-1999
01-NOV-1999
01-OCT-2000
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SIGNAL
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                                                                                                                                                          Hsieh J.-C., Kodjabachian L., Rebbert Smallwood P.M., Samos C.H., Nusse R., "A new secreted protein that binds to activities.", Nature 398:431-436(1999).
                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
NCBI_TaxID-9606;
                                                                                                                 PRINTS; PRO0011; EGFLAMININ.

PROSITE; PS00022; EGF_1; UNKNOWN_5

PROSITE; PS01186; EGF_2; 4.
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NOV-1999 (TrEMBLrel. 12, Last and
OCT-2000 (TrEMBLrel. 15, Last and
INHIBITORY FACTOR 1 PRECURSOR (W
                                                                                                                                                                                                                                                           FUNCTION: BINDS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               223
                                                                                                     domain;
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75
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Signal;
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EGF-LIKE 2.
EGF-LIKE 3.
EGF-LIKE 3.
EGF-LIKE 4.
EGF-LIKE 4.
EGF-LIKE 5.
POTENTIAL.
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  POTENTIAL.
WNT INHIBI
EGF-LIKE 1
EGF-LIKE 2
EGF-LIKE 3
EGF-LIKE 3
EGF-LIKE 4
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annotation update)
R (WNT INHIBITORY FACTOR-1) (WIF-1).
                                                                          INHIBITORY
                                                                                                  Developmental protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           379
                                                                                                                                                                                                                                                                                              M.L., Rattner A.,
Dawid I.B., Nathans J.;
Wnt proteins and inhibits
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                                                                          FACTOR
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Best Local S
Matches 6
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-I- SIMILARITY: CONTAINS 5
EMBL; AF122923; AAD25403.1
HSSP; P00740; 11XA.
MGD; MGI:1344332; Wif1-pen
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O9WUA1;
O1-NOV-1999 (TIEMBLIEL 1
O1-NOV
  Repeat; F
SIGNAL
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Hsieh J.-C., Kodjabachian L., Rebbert M.L., Rattner A.,
Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
"A new secreted protein that binds to Wnt proteins and inhibits their
                                                                                                                                                       PRINTS; PRO0011; EGFLAMININ PROSITE; PS00022; EGF_1; UNI PROSITE; PS01186; EGF_2; 4
                                                                                                                                                                                                  INTERPRO; IPR002049; PFAM; PF00008; EGF;
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                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-99215557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                               INTERPRO; IPR000561;
INTERPRO; IPR002049;
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TISSUE SPECIFICITY: EXPRESSION HIGHES
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75.0%;
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12, Last sequence update)
15, Last annotation update)
PRECURSOR (WNT INHIBITORY F
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H 0
                                                                                                                                           UNKNOWN_5.
4.
Signal; Developmental protein
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POTENTIAL.

WAT INHIBITORY FACTOR 1.

EGF-LIKE 1.

EGF-LIKE 3.

EGF-LIKE 4.

EGF-LIKE 5.

POTENTIAL.

POTENTIAL.

POTENTIAL.
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RESULT O75413
ID O75413
AC O7
D7 O7
D7 O7
D7 O O7
D7 O
                D 075413

D 075413;

C 075413;

C 075413;

OT 01-NOV-1998 (TrEMBLrel. 08, Created)

DT 01-NOV-1998 (TrEMBLrel. 08, Last sequence update)

DT 01-NAY-2000 (TrEMBLrel. 13, Last annotation update)

DE LATENT TRANSFORMING GROWTH FACTOR-BETA BINDING PROTEIN

OS Homo sapiens (Human).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; El
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DT 01
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Best Local S
Matches 6
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Best Local S
Matches 6
         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE: PS00022; EGF_1; UNKNOWN_1.
PROSITE: PS01186; EGF_2; 1.
Transferase; Glycosyltransferase.
SEQUENCE 531 AA; 61053 MW; 3CF56C518F6248B0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Barlow K.;
Submitted (DEC-1999) to the
EMBL; AL022312; CAB45282.1;
INTERPRO; IPR000561; -.
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Q9UH32;
Q1-MAY-2000 (TrEMBLrel. 13, Created)
Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Q1-JUN-2000 (TrEMBLrel. 14, Last annotation update)
D31104E15.1 (MANNOSYL (BETA-1,4-)-GLYCOPROTEIN
BETA-1,4-N-ACETYLGLUCOSAMINYLTRANSFERASE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112
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Eukaryota; Metazoa; Chcrdata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
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FROM N.A.
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Pred. No. 19;
1; Mismatches
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                                                                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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RESULT
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AC OS
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DT 01
DT 01
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A Banta A., Spies T., Hood L.;

IL Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.

IR EMBL; U89336; AAB47494.1; -.

IR HSSP; P35555; 1EMN.

IR HSSP; P35555; 1EMN.

IR INTERPRO; IPRO00162; -.

IR INTERPRO; IPRO001881; -.

IR INTERPRO; IPRO001881; -.

IR PRAM; PE000018; EGF-1; UNKNOWN_1.

IR PROSITE; PS001016; ASX_HYDROXYL; 1.

PROSITE; PS01186; EGF-2; 1.

IR PROSITE; PS01187; EGF-1; UNKNOWN_1.

IR PROSITE; PS01187; EGF-2; 1.

IR PROSITE; PS01187; EGF-2; 1.

IR PROSITE; PS01187; EGF-CA; 1.

IR PROSITE; PS01187; EGF-CA; 1.
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Best Local
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Q99944, O1-MAY-1997 (TIEMBLITEL 03, Crea
01-MAY-1997 (TIEMBLITEL 03, Last
01-CCT-2000 (TIEMBLITEL 15, Last
HYPOTHETICAL 32.3 KDA PROTEIN.
HOMO Saplens (Human),
Eukaryota; Metazoa; Chordata; Cr
Mammalia; Eutheria; Primates; Ca
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Best Local :
                 094106;
094106;
01-MAY-1999
01-MAY-1999
01-OCT-2000
HEAT SHOCK PI
  PCSA1
                                                                                                                                                                                                                                                           121
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[1]
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MEDILINE-98325059; PubMed-9660815;

Saharinen J., Taipale J., Monni O., Keski-Oja J.;

"Identification and characterization of a new latent growth factor-beta-binding protein, LTBP-4.";

J. Biol. Chem. 273:18459-18469(1998).

EMBL; AF051345; AAC39880.1; -.

INTERPRO; IPR000561; -.

INTERPRO; PF00008; EGF; 1.
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NON_TER 179 179
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121 GGVCVRP 127
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6; Conserv
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       (TrEMBLrel. 10, Created)
(TrEMBLrel. 10, Last sequence up
(TrEMBLrel. 15, Last annotation
PROTEIN 70 (FRAGMENT).
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179 AA;
                                                                                                                                  PRELIMINARY;
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85.78;
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85.78;
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                                                                                                                                                                                                                                                                                                                                       Score 37; DB Pred. No. 23; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                            1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 37;
Pred. No.
                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       137530C3FC8B2131 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                    293;
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                                                                                                                                                                                                                                                                                                                                     0;
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RESULT
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Best Local S
Matches 6
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             094104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Paul S.P., Graves D.C.;
"Phylogeny and sequence analysis of Pneumocystis carinii HSP70.";
submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; U71151; AAD09565.1; -.
HSSP; P19120; 3HSC.
INTERPRO; IPR000169; -.
INTERPRO; IPR001023; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stedman T.T., Buck G.A.;
"Identification, characterization, and expression endoplasmic reticulum resident chaperonins in Pneu Infect. Immun. 64:4463-4471(1996).
EMBL; U80967; AADD0455.1; -.
HSSP; P19120; 3HSC.
INTERPRO; IRR000169; -.
                                                                                                                                                                                                                                                                                             PRINTS; PR00301; HEATSHOCK70.

PROSITE; PS00297; HSP70_1; UNNOWN_1.

PROSITE; PS00329; HSP70_2; 1.

PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.

PROSITE; PS01036; HSP70_3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-1999 (TrEMBLrel. 10, Creat
01-MAY-1999 (TrEMBLrel. 10, Last
01-CCT-2000 (TrEMBLrel. 15, Last
HEAT SHOCK PROTEIN 70 (FRAGMENT)).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00301; HEATSHOCK70.

PROSITE; PS00297; HSP70_1; UNKNOWN_1.

PROSITE; PS00329; HSP70_2; 1

PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.

PROSITE; PS01036; HSP70_3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pneumocystis carinii f. sp. carinii.
Eukaryota; Fungi; Fungi incertae sedis; Pneumocystidaceae;
Pneumocystis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=4754;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Fung1; Pneumocystis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-97045128; PubMed-8890193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=38081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PFAM; PF00012; HSP70; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pneumocystis carinii.
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|| | || ||
521 GGACSQPG 62
      GGVCVQPG 8
                                                                                                                                                                                                                                                                       shock.
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6; Conserv
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6; Conserv
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645 AA;
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                                                              Conservative
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70884 MW;
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71176 MW;
                                                                                      78.7%;
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75
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Last sequence update)
Last annotation update)
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                                                          Score 37; DB Pred. No. 48; 0; Mismatches
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Pred. No.
                                                                                                                                                                                                            92F94963999380F9 CRC64;
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                                                                                                                  Length 647;
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                                                              Indels
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Best Local S
Matches 6
                                                                                                                                                                                                                                  INTERPRO; IPRO00884; -.
INTERPRO; IPRO01846; -.
INTERPRO; IPRO02172; -.
INTERPRO; IPR002465; -.
INTERPRO; IPR002919; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           binding protein.";
binding protein.";
Nature 397:617-621(1999).
EMBL; AF116865; AAD31172.1; -.
INTERPRO; IPRO00561; -.
INTERPRO; IPRO0022; EGF_1; UNKNOWN_2.
PROSITE; PS00022; EGF_2; 2.
SEQUENCE 700 AA; 78485 MW; DC19B3929AFC6354 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9WU59;
Q9WU59;
Q1-NOV-1999
Q1-NOV-1999
Q1-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O02660;
O1-JUL-1997 (TrEMBLrel. 04, Created)
O1-JUL-1999 (TrEMBLrel. 09, Last sequence update)
O1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
SCO-SPONDIN (FRAGMENT).
Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bos.
NCBI_TaxID-9913;
                  PFAM; PF00057; 1dl_recept_a; 7.
PFAM; PF00090; tsp_1; 1.
PFAM; PF00094; vwd; 1.
PFAM; PF01826; TIL; 2.
PRINTS; PR00261; LDLRECEPTOR.
PROSITE; PS00340; RECEPTOR_CYTOKINES_2; UNKNOWN_2.
PROSITE; PS01209; LDLRA_1; 4.
                                                                                                                                                                                                                                                                                                                                                                                Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases EMBL; Y08560; CAA69867.1; -. HSSP; P01130; 1AJJ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
TISSUE-SUBCOMMISSURAL ORGAN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          002660
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gobron S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE-99158142;
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-NAY-2000 (TrEMBLrel. 13, Last annotation update)
HEDGEHOG-INTERACTING PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10090;
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6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=10050855;
hon A.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78.7%;
85.7%;
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
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X MEDLINE-B98325059; PubMed-9660815;
Y Saharinen J., Taipale J., Monni O., Keski-Oja J.;
Y Identification and churacterization of a new lat
I growth factor-beta-bincling protein, LTBP-4.";
L J. Biol. Chem. 273:18459-18469(1998).
EMBL; AR051344; AA039879.1; -.
R HSSP; D35555; IEMN.
R INTERPRO; IPR000152; -.
R INTERPRO; IPR000351; -.
R INTERPRO; IPR0002212; -.
R INTERPRO; IPR002212; -.
R INTERPRO; IPR00039; EGF; 17.
R INTERPRO; IPR00039; EGF; 17.
R PFAM; PF00003; TB; 4
R PROSITE; PS0010; ASX_HYDROXYL; 14.
PROSITE; PS01186; EGF_2; 12.
R PROSITE; PS01186; EGF_2; 17.
R PROSITE; PS01187; EGF_17.
R PROSITE; PS01187; EGF_17.
R PROSITE; PS01187; EGF_11ke domain.
SEQUENCE 1511 AA; 161157 MW; C61AB757B256958I
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Best Local Similarity 75.0
Matches 6; Conservative
                                                                                                               000508;
                                                     01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
LATENT TGF-BETA BINDING PROTEIN-4.
Homo sapiens (Human).
Eukaryota; Metazoa; Chondata;
Mammalla; Eutheria; Prinates;
NCBI_TaxID=9606;
[1]
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NON_TER 87
SEQUENCE 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     075412
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01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
LATENT TRANSFORMING GROWTH FACTOR-BETA BINDING PROTEIN 4S.
                                                                                                                                                                                        1 GGVCVQP 7
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47 GGVCVKP 53
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91875 MW;
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75.0%;
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                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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Pred. No.
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1.1e+02;
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INTERPRO: IPR000561; -.
INTERPRO: IPR001881; -.
INTERPRO: IPR0012212; -.
PEAM; PF00008; EGF; 17.
PFAM; PF00683; TB; 4.
PROSITE; PS00010; ASX_HYDROXYL; 14.
PROSITE; PS00010; ASX_HYDROXYL; 14.
PROSITE; PS01186; EGF_1; UNKNOWN_2.
PROSITE; PS01187; EGF_CA; 17.
Glycoprotein; EGF-like domain.
SEQUENCE 1587 AA; 169620 MW; 57A8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Sequence and expression of a novel member (LTBP-4) of the latent transforming growth factor-beta binding proteins."; EMBL; Y13622; CAA73944.1; -. HSSP; P35555; IEMN. INTERPRO: TRANSACTION OF TRANSACTI
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MEDLINE=97415399; PubMed=9271198;

Giltay R., Kostka G., Timpl R.;
                                                                                                                                                                               123 GGVCVKP 129
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                                June
                                13,
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85.7%;
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Pred. No. 1.1e+02;
1; Mismatches 0;
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Title: Perfect score: Sequence:

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1: /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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US-08-845-809A-125
US-07-728-215-39
US-07-728-215-39
US-07-728-215-32
US-08-445-042-4
US-08-445-809A-108
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US-08-445-809A-108
US-08-445-197-38
US-08-448-197-38
US-08-483-199-16
US-08-483-197-38
US-08-483-197-38
US-08-483-197-38
US-08-483-197-38
US-08-483-197-39-101
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US-08-485-135-2
US-09-247-819-8
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Sequence 4, Appli Sequence 5, Appli Sequence 5, Appli Sequence 125, Appli Sequence 115, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli Sequence 16, Appli Sequence 16, Appli Sequence 16, Appli Sequence 16, Appli Sequence 17, Appli Sequence 17, Appli Sequence 2, Appli Sequence 4, Appli Sequence 5, Appli Sequence 6, Appli Sequence 6, Appli Sequence 101, Appli Sequence 15, Ap
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US-08-975-114A-4
                                                                                                                                  ; MOLECULE TYPE: US-08-975-114A-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: D.C.

STATE: D.C.

COUNTRY: U.S.A.

ZIP: 20006

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb

COMPUTER: IBM Compatible

OPERATING SYSTEM: MS-DOS

SOFTWARE: WOrdperfect 5.1

CURRENT APPLICATION NUMBER: US/08/975,114A

FILING DATE: NO. 5876714ember 20, 1997

CLASSIFICATION 1435

PRIOR APPLICATION DATA:

APPLICATION 1435

PRIOR APPLICATION DATA:

APPLICATION 1043ER: 08/107,173

FILING DATE: AUGUST 17, 1993

ATTORNEY/AGENT INFORMATION:

NAME: Lee Checo
                        Query Match 80.9
Best Local Similarity 75.0
Matches 6; Conservative
                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 1-TELECOMMUNICATION INFORMATION: 202-721-8200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Atsushi NISHIKAWA et al.
TITLE OF INVENTION: HUMAN GLYCOSYLTRANSFERASE GENE,
TITLE OF INVENTION: COMPOUNDS AND METHOD FOR INHIBITING CANCEROUS METASTASIS
                                                                                                                                                                        LENGTH: 531 amino
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Lee Cheng
REGISTRATION NUMBER: 40,949
                                                                                                                                                                                                                                                                                                                             TELEFAX:
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2033 K Street,
                                                                                                                                                                                                                                           531 amino acid
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US-08-472-173-15
US-08-487-167-15
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US-08-615-271-15
US-09-074-650-15
US-09-074-650-15
US-09-106-468-15
US-09-106-4667-15
US-09-106-467-15
US-09-106-467-15
US-09-255-699-34
US-09-273-565-34
US-09-273-565-34
US-08-677-734A-10
US-08-677-734A-10
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Pred. No. 66;
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Suite 800
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                                                                                                                                                  Sequence 5, Application US/08975114A Patent No. 5876714
                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 531 amino acid residues
                                                                        APPLICANT: ACSUSHI NISHIKAWA et al.
TITLE OF INVENTION: HUMAN GLYCOSYLTRANSFERASE GENE,
TITLE OF INVENTION: COMPOUNDS AND METHOD FOR INHIBITING CANCEROUS METASTASIS
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: E1j1 M
                                                        CORRESPONDENCE ADDRESS
                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: 97-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-721-6200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMACION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: M3-DOS
SOFTWARE: Wordperfest 5.1
CURRENT APPLICATION DATA:
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STATE: D.C.
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NUMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 40,949
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                         E: Wenderoth, Lind & Ponack, L.L.P. 2033 K Street, N.W., Suite 800
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                                                                                                                                                                                                                                                                                                                                                                                                        linear
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/ENTION: INHIBITOR FOR VIRAL REPLICATION
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33 K Street, N.W., Suite 800
                                                                                                                                                                                                                                                                                                                                                                                      polypeptide
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75.0%;
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Pred. No.
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US-08-849-281A-3
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                               SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
COMPUTER: IBM Compatib
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Eiji MIYOTITLE OF INVENTION: NUMBER OF SEQUENCES:
                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                 STREET: 2033 K St. CITY: Washington STATE: D.C.
 NAME: Lee Cheny
REGISTRATION NUMBER: 40,949
------ NOOVET NUMBER: 97-0529*/LC(MJ)/1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 40,949
REFERENCE/DOCKET NUMBER: 1-1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-721-8200
                                                                                                                APPLICATION NUMBER: FILING DATE: May 30 CLASSIFICATION: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      112 GGVCFKPG 119
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MEDIUM TYPE: Diskett
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CURRENT APPLICATION DATA:
                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                 OPERATING SYSTEM:
SOFTWARE: Wordper
                                                                             FILING DATE:
                                                                                                                                                                                                                                                                           COUNTRY:
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REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/975,114A FILING DATE: No. 5876714ember 20, 1997
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ZIP: 20006
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August 17, 1993
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                                                      Query Match
Best Local S
Matches 7
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Best Local :
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                                                                                                                                                                                                                            TELEFAX: (202) 293-7860 INFORMATION FOR SEQ ID NO:
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SEQUENCE CHARACTERISTICS:
LENGTH: 536 amino acid residues
TYPE: amino acid
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TOPOLOGY: lin
MOLECULE TYPE:
                                                                                                                                        MOLECULE TYPE: HYPOTHETICAL:
                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
                                                                                                                                                                                                                                                     NAME: KIT, Gordon
REGISTRATION NUMBER: 30,764
REFERENCE/DOCKET NUMBER: A-(
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 293-7060
                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/859,931A FILING DATE: 21 MAY 1997 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Washington, D.C. STATE: D.C.
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nes 6; Conserv
                                                                                                                                                                                    TYPE:
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                          GGVCVQPG 8
 GGVLVQPG 15
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                                                      l Similarity
7; Conserv
                                                                                                                                                                                 amino acid
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202-721-8250
                                                      Conservative
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                                                                                                                                     NO NO
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                                                                    78.7%;
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                                                     Score 37; DB 2; Pred. No. 4.4; 0; Mismatches
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Pred. No.
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Best Local Similarity
~*~hes 7; Conserv
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                                                                                                                                                                                                                                               Patent No.
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                                                                                                                                                                                                                                                                 Sequence 39,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US/08/545,809A
FILING DATE: 27-MAR-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP93/00603
FILING DATE: 10-MAX-1993
ATTORNEY/AGENT INFORMATION:
NAME: Ereeman, John W.
REGISTRATION NUMBER: 29,066
                                                                                                                  APPLICANT: Sheppard, Dean APPLICANT: Quaranta, Vito APPLICANT: Pytela, Robert TITLE OF INVENTION: A NO. 590 TITLE OF INVENTION: Thereof NUMBER OF SEQUENCES: 43
                                                                                                                                                                                                                              GENERAL INFORMATION:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
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SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
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                                                                                                   CORRESPONDENCE ADDRESS:
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TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Honjo, Ta
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                               CITY: San Diego
STATE: California
                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                        27 GGVVVQPG 34
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COUNTRY: UN
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                                                                                  ADDRESSEE:
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5962643
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                                                                E: Pretty, Schroeder, Brueggemann & Clark 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617-542-8906
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SYSTEM: Windows95
                States
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87.5%;
                of America
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                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: 931 8:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
TELEPHAX: (619) 535-9049
INFORMATION FOR SEQ ID NO: 41:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TOPOLOGY: linear; MOLECULE TYPE: protein US-07-728-215-39
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Best Local Similarity £3...
Matches 5; Conservative
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SEQUENCE CHARACTERIST:CS:
                          SEQUENCE CHARACTERISTICS:
LENGTH: 92 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Carthryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: 931
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 5:35-9001
                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
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APPLICANT:
APPLICANT:
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PatentIn Release #1.0, Version #1.25

APPLICATION NUMBER: US/07/728,215

CLASSIFTOAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: A NO. 5
TOPOLOGY:
              TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UMBER OF SEQUENCES:
                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 19910
                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC:-DOS/MS-DOS
SOFTWARE: Patentin Felease #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                                                                                                                                                                     San Diego
: California
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                                                                                                                                                                                                                                                                                                                                                                                                              E: Pretty, Schroeder, Brueggemann & Clark 4370 La Jolla Village Drive, Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pytela, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sheppard, Dean
Quaranta, Vito
                                                                                                                                                                                                                                                                                                                                                                 United States of America
                                                                                                                                                                                                    19910711
DN: '435
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Pred. No.
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Best Local Similarity
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                                                                                                                                                                                                                          PRIOR APPLICATION DATA:

APPLICATION NUMBER: 08/218878
FILING DATE: 28-MAR-1994
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/821337
FILING DATE: 13-JAN-1992
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/444490
FILING DATE: 01-DEC-1989
PRIOR APPLICATION DATA:

APPLICATION NUMBER: 07/290224
ETITING TARMED: 07-1909
                                                              TELEX: 910/371-7168
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                SEQUENCE CHARACTERISTICS
                                                                                                             REFERENCE/DOCKET NUMBER: POTELECOMMUNICATION INFORMATION: TELEPHONE: 415/225-1994
                                                                                                                                                         APPLICATION NUMBER: 07/290224
FILING DATE: 22-DEC-1988
ATTORNEY/AGENT INFORMATION:
NAME: Lee, Wendy M.
REGISTRATION NUMBER: 00,000
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/380227
FILING DATE: 30-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 720 Kb floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: WinPatin (Ge:
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS
                                                                           TELEFAX: 415/952-98
TELEX: 910/371-7168
COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08 FILING DATE: 19-May-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Genentech, Inc
STREET: 460 Point San Bru
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82 VCIQPG 87
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                 1: 718 amino acids
Amino Acid
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Gorman, Cornelia M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM PC compatible SYSTEM: PC-DOS/MS-DOS
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MARY A.
METHOD FOR PREPARING WATER SOLUBLE
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83.3%;
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Pred. No. 54;
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                                               Query Match
Best Local S
Matches 5
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5726290
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                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch, 720 Kb floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WinPatin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 718 amino acids
TYPE: Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/2:
FILING DATE: 28-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 VCVQPG 8
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613 VCIQPG 618
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 07/444490 FILING DATE: 01-DEC-1989 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/821337
FILING DATE: 13-JAN-1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                               TELEPHONE: 415/225-1994
                                                                                                                                                                                                                                                                                                                                               FILING DATE: 22-DEC-1988 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: McLean, John W
APPLICANT: Napier, Mary A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE. California
                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 00 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 08/380227 FILING DATE: 30-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 07/290224
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 3 VCVQPG 8
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                                                 Similarity
5; Conser
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                                                   Conservative
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                                                                72.3%;
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                                               Score 34; DB 1; Le pred. No. 3.7e+02; 1; Mismatches 0;
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                                                                              Length 718;
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US-07-728-215-32
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Best Local Similarity
Watches 5; Conserve
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                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (619) 535-894
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                   APPLICANT: HONJO, Tasunu
APPLICANT: Matsuda, Fumihiko
APPLICANT: Matsuda, Fumihiko
APPLICANT: MATSUDAN IMMUNOGLOBULIN VH GENE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Campbell, Cathryn A.
REGIESRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: 93
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 19910711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
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APPLICANT: Pytela, Robert
APPLICANT: Pytela, Robert
APPLICANT: Pytela, Robert
COMPUTER READABLE FORM:
                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                  613 VCIQPG 618
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         613 VCIQPG 618
          COUNTRY: US
7.TP: 02110-2804
                                                 CITY: Boston
STATE: MA
                                                                ADDRESSEE: Fish a ...
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: San Diego
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92122
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                                                                                                                                                SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                72.3%;
                                                                                               Richardson, P.C.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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4e+02;
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Gaps

SOFTWARE: FastSEQ for CURRENT APPLICATION DATA:

OPERATING SYSTEM:

Diskette

IBM Compatible
SYSTEM: Windows95
FastSEQ for Windows Version 2.0

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RESULT 13
US-08-475-000-16
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                              TELEFAX: (510) 655-35.42
NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                NAME: SAVEREIDE, PAUI,
REGISTRATION NUMBER: 36,914
REFERENCE/DOCKET NUMBIR: 08
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                       APPLICATION NUMBER: US/08
FILING DATE: 07-JUN-.995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMAT:ON:
                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatil
                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: CHIRON CORPORATION
STREET: INTELLECTUAL PROPERTY R440 - P.O. BOX 8097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIC
TITLE OF INVENTION: MOLEC
                                                                                                                                                                                                                                                                                                                                                                                                    STREET: INTERPORTED TO THE STREET: Emeryville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTI(S:
LENGTH: 118 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 617-542-5070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/545,809A FILING DATE: 27 MAR 1996 PRIOR APPLICATION DATA: APPLICATION NUMBER: PCT/JP93/00603 FILING DATE: 10-MAY-1993
                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC DOS/MS DOS
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 94662-8097
              JENGTH: 119 amino acids
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nes 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Freeman, John W. REGISTRATION NUMBER: 2
                                                                                                   (510) 601-2585
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10-MAY-1993
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75.0%;
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Pred. No. 98;
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                                                                                                Sequence 16, Application US/08484508 Patent No. 5948647
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                                                                           GENERAL INFORMATION:
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Best Local Similarity 75.0
Matches 6; Conservative
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/483
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
REGISTRATION NUMBER: 36,914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
             APPLICANT: RIMG, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 94662-8097
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARDE: Bat-OF-T-D-D-MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 08
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
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                                                                                                                                                                                                                                                                                                                                                                                TYPE:
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CITY: Emeryville
STATE: CA
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INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
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Pred. No.
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Pred. No.
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STATE: CA
COUNTRY: USA
2IP: 94662-8097

COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTION DATA:
APPLICATION UMBER: US/08/484,508
FILING DATE: 07-JUN-1995
CLASSIFICATION: 34
APTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
REFERENCE/DOCKET NUMBER: 0850.008
TELECOMMUNICATION INFORMATION:
TELEPHONE: (510) 601-585
TELEFAX: (510) 655-3542
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: amino acids
TYPE: protein
US-08-484-508-16:
Search completed: June 13, 2001, 14:16:35 Job time: 496 sec
                                                                                                                                                                            Ouery Match 70.2%; Score 33; DB 2; Length 119; Best Local Similarity 75.0%; Pred. No. 98; Matches 6; Conservative 1; Mismatches 1; Indels
                                                                                                 1 GGVCVQPG 8
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8 GGVLVRPG 15
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STREET: INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
CITY: Emeryville
STATE: CA
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밁 Š This Page Blonk (USDto)

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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2: /SIDS6/gcgdata
3: /SIDS6/gcgdata
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Gapop 10.0 , Gapext 0.5
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7 %	YP?	Y P A	Y P R	Y PF	¥ 23 %	Y P.	8 S	XXXXXXX	X D	X C	X A :	RESULT Y79118 ID Y		•
WPT · 2	Fasano	(UYMA-)	03-AUG	28-JUL	17-FEB-	WO200007609-A1.	Synthetic	Zonulin; antagoni. blood-brain barri. neuroprotective; antibacterial; cy hypotensive; immu gastrointestinal	Peptide	05-JUN	Y79118	LT 1 18 Y79118		444443333333333222222222211111112 5443109876543210987654321
2000-2	A;	) UNIV	-AUG-1998	-JUL-1999;	-2000	07609	tic.	n; an brain rotec cteri	e ant	5-JUN-2000	••			│ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
205565/18		V MARYLAND	; 98US		•	-A1.		Zonulin; antagonist; zonula occl blood-brain barrier; antiinflamm neuroprotective; dermatological; antibacterial; cytostatic; anti-hypotensive; immunosuppressive; gastrointestinal inflammation; t	antagonist	(first		standard; Pe		7777777777777333335556633
-			98US-0127815	99WO-US16683				; zon ; ant ; ant ermato stati suppr flamm	of zo	entry)		Peptide;		115 336 449 4473 6563 6669 6669 6793 793 7793 7793 1158 876 31 1158 7158 876 2647 2647
		BALTIMORE	815.	683.				zonula o antiinfl atologic atic; an ppressiv ammation	zonulin.	Y)		80		20 20 20 20 20 20 20 20 20 20 20 20 20 2
		RE.					-	<pre>gonist; zonula occludens toxin receptor; arrier; antiinflammatory; cerebroprotective; ve; dermatological; antiulcer; antiviral; ; cytostatic; anti-HIV; vulnerary; antiallergic; immunosuppressive; antiparasitic; vasotropic; nal inflammation; therapy.</pre>				AA.	ALIGNMENTS	W05520 W05520 Y79110 Y79110 Y34458 Y34434 R866669 R866669 W70693 W70693 W70693 W70693 W70693 W70693 W70693 W70793 W70893 W70893 W70893 W7093 W7
	•								ve; lergic; pic;					

Result

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Score

Query Match

Length

DB

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Description

SUMMARIES

100.0 93.5 89.1 84.8 84.8 82.6 80.4 78.3 78.3 78.3

Y79118 Y79122 Y36831 Y79117 Y79126 Y79106 W09406 Y79120 Y79121

Peptide antagonist Peptide antagonist Amino acid sequenc Peptide antagonist Peptide antagonist Peptide antagonist Peptide antagonist Peptide antagonist Peptide antagonist

guanylin

PXX

WPI; 2000-205565/18.

New peptide antagonist of zonulin useful as antiinflammatory agent for

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RESULT
Y79122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                     Zonulin; antagonist; zonula occludens toxin receptor; blood brain barrier; antilinflammatory; cerebroprotective; neuroprotective; dermatological; antilicer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic;
                                                                03-AUG-1998;
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                                                                                                                                                                                                                                                   WO200007609-A1
                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                     gastrointestinal inflammation; therapy
(UYMA-) UNIV MARYLAND BALTIMORE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                             98US-0127815
                                                                                                                        99WO-US16683
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Pred. No. 3.
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meningitis, encephalomyelitis
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s 0;
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Best Local
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04-NOV-1998;
                                                                                27-NOV-1998;
                                                                                                                                                                                                                                                                                                                         Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                Vaccine; eye disease; conventional trachoma; nonendemic trachoma; paratrachoma; inclusion conjunctivitis; genital disease; perihepa nongonococcal uretritis; epidymitis; cervicitis; salpingitis; bartholinitis; pneumopathy; venereal lymphogranulomatosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amino acid sequence of a Chlamydia trachomatis protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-OCT-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Y36831 standard; Protein; 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e.g. systemic lupus erythematosus or food allergies, milk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 46; 69pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fasano A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGVCVQDG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 gglcvqdg 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
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7; Conserv
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98US-0107077
                                                                            98WO-IB01939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 43; DB 21;
Pred. No. 3.2e+05;
1; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          perihepatitis;
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marily to
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               v36754-v37949 are encoded by open reading frames (ORFs) of the genome of Chlamydia trachomatis (see 201425). The polypeptides can be used as vaccines against Chlamydia trachomatis. Antisense and ribozyme sequences can also be used to control growth of the microorganism. Chlamydia trachomatis is responsible for a large number of diseases, e.g. eye diseases such as conventional trachoma, nonendemic trachoma, paratrachoma, and inclusion conjunctivitis; genital diseases such as nongonococcal uretritis, epidymitis, cervicitis, salpingitis, perihepatitis, bartholinitis; pneumopathy in breast feeding infants; and venereal lymphogranulomatosis. The polypeptides of the invention may be of use in treating these diseases.
New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                               neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome sequence of Chlamydia trachomatis
                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                        05-JUN-2000 (first entry)
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                                                          WPI; 2000-205565/18
                                                                                                                                            03-AUG-1998;
                                                                                                                                                                       28-JUL-1999;
                                                                                                                                                                                                 17-FEB-2000
                                                                                                                                                                                                                           WO200007609-A1
                                                                                                                                                                                                                                                                                                                                       blood-brain barrier;
                                                                                                                                                                                                                                                                                                                                                  Zonulin; antagonist;
                                                                                                                                                                                                                                                                                                                                                                               Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Y79117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Y79117 standard;
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17-DEC-1997;
                                                                                                               VIND (-AMYU)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         196 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 710-711; 1755pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                 MARYLAND BALTIMORE
                                                                                                                                           98US-0127815.
                                                                                                                                                                      99WO-US16683
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97FR-0016034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide;
                                                                                                                                                                                                                                                                                                                                     zonula occludens toxin receptor; antiinflammatory; cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    89.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 196;
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physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastriets, yastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tubercoulosis, and after surgical
                                                                         correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, cosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
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Query Match
Best Local
                                                                      Matches
Y79126 standard; Peptide; 8
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                                                     1 GGVCVQDG
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                                      ggvcvqpg
                                                                     Similarity 7; Conserv
                                                                     Conservative
                                                      8
                                        8
                                                                             84.8%;
                                                                    Score 39; DB Pred. No. 3.2e 0; Mismatches
                                                                     0;
                                                                             .2e+05;
                                                                                     21;
                                                                                    Length 8;
                                                                     Indels
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                                                                    Gaps
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RESULT
Y79126
                                                                                                                                                                           Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiilcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
                                                                                                                                     Synthetic
                                                                                                                                                                                                                                Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                      05-JUN-2000 (first entry)
                                                  03-AUG-1998;
                                                                       28-JUL-1999;
                                                                                            17-FEB-2000
                                                                                                                 WO200007609-A1.
                                                                                                                                                           gastrointestinal
                                                                                                                                                                   hypotensive; immunosuppressive; antiparasitic; vasotropic,
                                                                                                                                                                                                                                                                             Y79126
                             (UYMA-) UNIV
                              MARYLAND BALTIMORE
                                                  98US-0127815
                                                                       99WO-US16683
                                                                                                                                                           inflammation;
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Fasano A;

WPI; 2000-205565/18

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RESULT
Y79106
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Best Local
                                                                                                                                                                                                                                                                      Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antival; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; antibarasitic; vasotropic;
03-AUG-1998;
                                                28-JUL-1999;
                                                                                                   17-FEB-2000
                                                                                                                                                          WO200007609-A1
                                                                                                                                                                                                                                                        gastrointestinal inflammation; therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y79106 standard; Peptide; 8 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity hes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGVCVQDG 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ). The peptide antagonists are based on a common motif of ZOT human zonulins, which is believed to be critical for receptor ding. They can be prepared by chemical synthesis or by use of ombinant DNA technicans.
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                                             99WO-US16683
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. 3.26
); Mismatches
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3.2e+05;
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RESULT
W09406
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              intestine. Gastrointestinal inflammation conditions give rise to concreased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, c.g. caused by infection, e.g. Clostridium difficile infection.

C caused by infection, e.g. Clostridium difficile infection, control overgrowth, whipple's disease, diseases with concern colitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with collagenous colitis, inflammatory bowel disease, diseases marked by tymphatic obstruction, e.g. congenital intestinal lymphangiactasia, correction of congenital heart disease with Fontan's operation, concessal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and after surgical coeliac disease, eosinophilic gastroenteritis, and immune disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, coeliac disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, coeliac disease, coeliac di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 82.0
Best Local Similarity 87.0
Matches 7; Conservative
                                                                                                                                                                                            TGF-alpha; human; transforming growth factor alpha-HI; treat; promote; wound healing; neurological functioning; trauma; AID ocular disorder; susceptibility; diagnosis.
                                                                         Peptide
                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                  Transforming growth factor alpha-HI.
                                                                                                                                                                                                                                                                                                                                                                                   03-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09406 standard; Protein; 380 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TV in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (TJ). The peptide antagonists are based on a common and human zonulins, which is believed to be critical binding. They can be prepared by chemical synthesis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 1; Page 41; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This present sequence is that of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2000-205565/18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 GGVCVQDG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 grvcvqdg 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      œ
                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
              /note= "putative signal peptide"
40..266
                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 38; DB 21;
Pred. No. 3.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ight junctions motif of zor for receptor or by use of
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RESULT
Y79120
В
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Best Local
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                                                                                                                                                                                                                                                                                      ACOULTII; an any vinact, provided the provided the provided tree; antinflammatory; cerebroprotective; blood-brain barrier; antiological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; humorensive: immunosuppressive; antiparasitic; vasotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA encoding transforming growth used to promote wound healing, to after trauma or AIDS dementia
                                                                                                                                                                                                                                                                         gastrointestinal inflammation; therapy
                                                                                                                                                                                                                                                                                                                                                                                                    Zonulin; antagonist; zonula occludens toxin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       479120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Y79120 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to promote wound healing, to restore neurological functioning after trauma or AIDS dementia, to treat ocular disorders, etc. Disease or a susceptibility to disease can be diagnosed by determining a mutation in the nucleic acid sequence encoding TGF-alpha-HI Receptors to TGF-alpha-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is that of human transforming growth factor (TGF) alpha-HI. TGF-alpha-HI or its inhibitor can be used to treat a patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
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                       03-AUG-1998;
                                                                         28-JUL-1999;
                                                                                                                                                                          WO200007609-A1
                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUN-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-043119/04.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                      antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fig 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to identify
                       98US-0127815
                                                                      99WO-US16683
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/note= "putative
317..380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide; 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80.4%;
75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.1e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 18;
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RESULT Y79121

9

Y79121 standard; Peptide; 8

05-JUN-2000 Y79121;

(first entry)

Peptide antagonist of zonulin.

B δÃ

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1 GGVCVQDG

Best Matches Query Match

Local

Similarity 7; Conserv

Conservative

0

78.3%; 87.5%;

Score 36; DB Pred. No. 3.2e 0; Mismatches

DB 21; 3.2e+05;

Length 8; Indels

0

Gaps

0

antibacterial;

blood-brain Zonulin;

antagonist;

barrier;

17-FEB-2000

WO200007609-A1

Synthetic

hypotensive; immunosuppressive; antiparasitic; gastrointestinal inflammation; therapy.

neuroprotective; dermatological; antiulcer; antiviral;

antiinflammatory; zonula occludens toxin

cerebroprotective; receptor;

cytostatic; anti-HIV; vulnerary; antiallergic;

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binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                             sarcoldosis lymphoma, mesencertic courection of congenital heart disease with Fontan's operation, correction of congenital heart disease with Fontan's disease, mucosal diseases without ulceration, e.g. Menetrier's disease, coellac disease, eosinophilic gastroenteritis, and immune diseases, eosinophilic gastroenteritis, eosinophilic ga
                                                                                                                                                                                                                                                                                                                                         mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
Sequence
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          8
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Query Match
Best Local Similarity
""" ones 6; Conserv
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                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not the properties of the invention (ZOT). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of the recombinant DNA techniques. The peptide antagonists are used as an inflammation, where they bind to the ZOT receptor in the intestinal inflammation where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the cand yet does not physiologically modulate the opening of TJ in the creating intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy entercolitis, shigellosis, viral gastroenteritis, parasite to infestation, bacterial overgrowth, whipple's disease, diseases with collagenous colitis, inflammatory bowel disease, diseases with collagenous colitis, inflammatory bowel disease, diseases with collagenous colitis, inflammatory bowel disease, disease with grant consecution, e.g. congenital intestinal lymphangiactasia, collagenous without ulceration, e.g. Menetrier's disease, costangphilic gastroenteritis, and immune diseases, costangphilic gastroenteritis, and immune diseases, costangphilic gastroenteritis, and immune diseases, costangphilic gastroenteritis, and immune diseases.
Misc-difference
                                                          Homo sapiens
                                                                                                Human; guanylin;
bacterium; heat;
                                                                                                                                                      Human guanylin preprohormone
                                                                                                                                                                                                                                            Y42459;
                                                                                                                                                                                                    21-DEC-1999
                                                                                                                                                                                                                                                                         Y42459 standard; Protein; 115 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lupus erythematosus or food allergies, primarily
Location/Qualifiers
                                                                                     ; preprohormone; intestinal guanylate cyclase regulator; stable enterotoxin; laxative; constipation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US16683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            78.3%;
75.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 36;
Pred. No.
                                                                                                                                                        sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 21;
3.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
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RESULT 11
Y42460
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Best Local Similarity
Thes 7; Conserv
                 WPI; 1999-590442/50.
                                                                                                 23-JUN-1992;
                                                          (SEAR ) SEARLE & CO
                                                                             23-JUN-1992;
                                                                                                                      19-OCT-1999
                                                                                                                                                          Homo sapiens
                                                                                                                                         US5969097-A
                                                                                                                                                                                Human; guanylin;
bacterium; heat s
                                                                                                                                                                                                           Human guanylin preprohormone sequence.
                                                                                                                                                                                                                                  21-DEC-1999
                                                                                                                                                                                                                                                                       Y42460 standard; Protein; 115 AA
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                           coding sequence. Guanylin is an intestinal guanylate cyclase regulate which has similarity to bacterial heat stable enterotoxins which activate intestinal guanylate cyclases. The guanylin peptide can be used as a laxative in the treatment of constipation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a human guanylin preprohormone which is cleaved to generate a 15 amino acid mature peptide (Y42458). This sequence is the encoded protein from a composite DNA sequence isolated by probing a human duodenum cDNA library with the corresponding rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isolated protein used as a laxative in the treatment of constipation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-590442/50
N-PSDB; Z22677.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SEAR ) SEARLE & CO G D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23-JUN-1992;
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                                                                                                                                                                                                                                                                                                                       20 ggvtvqdg 27
                                                                                                                                                                                                                                                                                                                                            1 GGVCVQDG 8
                                     RC,
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                                                                                                                                                                                                                                                                                                                                                                                                                115 AA;
                                    Currie
                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                               (first entry)
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                                                                            92US-0903029
                                                                                               92US-0903029.
                                                                                                                                                                        ; preprohormone; intestinal guanylate cyclase regulator;
stable enterotoxin; laxative; constipation.
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/note= "encoded
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                                                                                                                                                                                                                                                                                                                                                                       78.3%;
87.5%;
                                     FOX
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                                     XF.
                                                                                                                                                                                                                                                                                                                                                             Score 36; DB
Pred. No. 52;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                    DB
52;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          guanylate cyclase regulator
                                                                                                                                                                                                                                                                                                                                                                              Length 115;
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Isolated protein used as a laxative in the treatment of constipation

Disclosure;

Fig

2;

14pp;

English.

This sequence represents a human guanylin preprohormone which is cleaved to generate a 15 amino acid mature peptide (v42458). Guanylin is an intestinal guanylate cyclase regulator which has similarity to bacterial heat stable enterotoxins which activate intestinal guanylate cyclases.

heat stable enterotoxins which activate intestinal guanylate cyclases the guanylin peptide can be used as a laxative in the treatment of

Query Match Best Local S Matches 7

Local Similarity nes 7; Conserv

Conservative

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Mismatches

Indels

0

Gaps

78.3%;

Score 36; Pred. No.

DB 52;

20;

Length 115;

Sequence constipation.

115 AA;

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RESULT
Y27892
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17-NOV-1997;
17-NOV-1997;
                                                                                                                                    07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
                                                                                                                                                                                            17-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
                                              Carter I
Kyaw H,
                                                                                                                                                                                                                                                                                                                    Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzhelmer's disease; restenosis; AIDS; cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteopprosis; arthritis; testis; lung; thyroiditis; thyroid; digestion; endocrine; metabolism; regulation; malabsorption; gastritis; neoplasm.
         WPI; 1999-337740/28
N-PSDB; X85048.
                                                                                                                                                                                                                                             04-NOV-1998;
                                                                                                                                                                                                                                                               20-MAY-1999
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                                                                                                                                                                                                                                                                                                     Homo sapiens
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                                  r KC, Ebner R,
H, Lafleur DW,
SM, Shi Y, Sc
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                                                                            HUMAN
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                                                                            GENOME
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97US-0064900
97US-0064911
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97US-0064985
97US-0064987
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                                     Feng
                                              P, Janat
Olsen HS,
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                                              Rosen
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W05520
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a secreted human protein encoded by the gene clone detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobulin for portion (e.g. x84924) for increasing the stability of the fused protein as compared to the human protein only.

The invention relates to 125 novel genes and their fragments (nucleic acid sequences: x84933-x85057; amino acid sequences x27567-x27933) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polynucleotides, based or which tissues they are most highly expressed in (see x84933 for described in the control of the contr
                  New isolated human cytomegalovirus nucleic acid - from Towne and Toledo strains, used to develop prods. for the diagnosis, preven and treatment of human CMV infections
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New human secreted proteins and coding sequences useful for treating disorders of the immune system and hyperproliferative disorders
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                                                                                                  1996-455265/45.
DB; T41418.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HCMV; vaccine;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytomegalovirus Toledo strain.
                                                                                                                                                          Spaete R;
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7; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnosis; UL151
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                     "unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "unidentified
                                                                                                                                                                                                                                                                                                                                                                                                "unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein (clone
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                                                                                                                                                                                                                                                                                                                                                                                              amino acid'
                                                                                                                                                                                                                                                                                                                                                                                                                                     amino
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                                       prevention
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Claim

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RESULT
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Best Local S
Matches 6
    This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (207) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of antiinflammatory agents in the treatment of gastrointestinal
                                                                                                                                                                                  New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                            Claim 1; Page 42; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic;
                                                                                                                                                                                                                                                         WPI; 2000-205565/18.
                                                                                                                                                                                                                                                                                                                    (UYMA-) UNIV MARYLAND HALTIMORE
                                                                                                                                                                                                                                                                                                                                                       03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                   17-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gastrointestinal inflammation;
                                                                                                                                                                                                                                                                                                                                                                                      28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel protein UL151 (1905520) is the product of an open reading frame found in a novel nucleic acid (T41418) isolated from the Toledo strain of human cytomegalovirus (HCMV). UL151 and other novel (see also W05502-19) and known (see also W05500-01) proteins of the Toledo strain, as well as new proteins (see also W05521-24) from HCMV Towne, can be produced in transformed host cells and used surface glycoproteins that are immunogenic or responsible for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y79110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y79110 standard; Peptide; 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       surface glycoproteins that are immunoyense of an infected tissue tropism, or may influence the immune response of an infected
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72 ggvcgedg 79
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6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                336 AA;
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The peptide antagonists are used he treatment of gastrointestinal
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TV in the intestine. Gastrointestinal inflammation conditions give rise to contreased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, conferenced by infection, bacterial overgrowth, whipple's disease, diseases with the conference of the con
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Best Local
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                                                                                                                                                                                                                                                                    New Vibrio cholerae strains -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUN-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZOT; cholera; vaccine; enterotoxin; diarrhoea.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R20006;
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                                                                                                                                                                                                                                                  encoding toxin, used as vaccines
                                                                                                                                                                                                                                                                                                                                                                                Baudry-Maurelli B,
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Pred. No. 3.2e+05;
1; Mismatches 1
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0

The amino acid sequence is that of the zonula occludens toxin (ZOT). It may be responsible for diarrhoea in some strains of cholera and the ZOT gene or fragments of it are deleted from strains of Vibrio cholerae (V.c.) to be used as vaccines. These V.c. strains have 100% efficacy in protecting humans against subsequent infection with a strain of a similar serotype and avoid undesirable side effects such as diarrhoea, nausea and cramping. Cultures of these strains may be

of vaccines

against cholera

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Ouery Match

Deat Local Similarity 75.0; pred. No. 2.3e-02;

Matches 6: Conservative 1: Mismatches 1: Indels 0; Gaps 0;

Oy 1 GGVCYODG 8

Db 29 grlcydd 298

Search completed: June 13, 2001, 14:14:37

Job time: 378 sec
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This Page Blonk (USDIO)

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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                            Score
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## ALIGNMENTS

hypothetical protein CT349 - Chlamydia trachomatis (serotype D, strain UM3/Cx) (Species: Chlamydia trachomatis C;Species: Chlamydia trachomatis C;Date: 13-Sep\_1998 #sequence\_revision 13-Sep-1998 #text\_change 08-Oct-1999 C;Accession: F71525

S.; Lammel, C.J.;

Fan, J.;

Marathe,

₽ ;

Aravind, L.; Mitche

an obligate intracellular pathogen of humans: Chlamydia  $\mbox{\sc MUID:}\,99000809$ 

C; Accession: F71525
R; Stephens, R.S.; Kalman, S.;
Science 282, 754-759, 1998
A; Title: Genome sequence of an
A; Reference number: A71570; M
A; Accession: F71525

A; Status: preliminary

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A; Molecule type: DNA
A; Residues: 1-196 <TET>
A; Cross references: GB:AF
A; Cross references: SB:AF
A; Cross reference: SB:AF
A; Genetics:
A; Gene: TC0628
C; Superfamily: Septum for
                                                                                                                                                         R;Read, T.D.; Brunham, R.C.; Shen, C.; Gill, S.R.; Heidelberg, J.F.; White, O.; Hicke, C.; Dodson, R.; Gwinn, M.; Nelson, W.; DeBoy, R.; Kolonay, J.; McClarty, G.; Salzbe Nucleic Acids Res. 28, 1397-1406, 2000.
A;Title: Genome sequences of Chlamydia trachomatis MoPn and Chlamydia pneumoniae AR39 A;Reference number: A81500; MUID:20150255
A;Accession: H81681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source: serotype C; Genetics: A; Gene: CT349 C; Superfamily: septum formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            maf protein TC0628 [imported] - Chlamydia muridarum (strain Nigg)
C;Species: Chlamydia muridarum, Chlamydia trachomatis MoPn
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 19-May-2000
C;Accession: H81681
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  septum formation protein mai
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                                                           source: strain
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                                                           GB:AE002331; GB:AE002160; NID:g7190662; PIDN:AAF39457.1; PID:g719
ce: strain Nigg (MoPn)
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87.5%;
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Pred. No.
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A; Experimental source: plasma
A; Note: amino-terminal sequencing of
C; Comment: Guanylin is an endogenous
    A;Gene: GDB:GUCA2
A;Cross-references:
                                                                                                                                                      A; Molecule type: protein A; Residues: 22-68 < KUH>
                                                                                                                                                                                               A;Cross-references: GB:M97496; NID:g183414; PIDN:AAA35915.1; PID:g183415 R;KUhn, M.; Raida, M.; Adermann, K.; Schulz-Knappe, P.; Gerzer, R.; Heim, FEBS Lett. 318, 205-209, 1993 A;Title: The circulating bioactive form of human guanylin is a high molecu A;Reference number: S29807; MUID:93178628
                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:M95174; NID:g306823; PIDN:AAA58625.1; PID:g306824
A;NOte: sequence extracted from NCBI backbone (NCBIN:115377, NCBIP:115378)
R;Wiegand, R.C.; Kato, J.; Huang, M.D.; Fok, K.F.; Kachur, J.F.; Currie, M.G.
PEBS Lett. 311, 150-154, 1992
A;Title: Human guanylin: cDNA isolation, structure, and activity.
A;Reference number: S29228; MUID:93011964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                guanylin precursor [validated] - numan ; Species: Homo sapiens (man) c; Species: Homo sapiens (man) c; Date: 21-Sep-1993 #sequence_revision 26-May-1995 #text_change 08-Dec-2000 C; Accession: A46279; S29228: S29807 C; Accession: A46279; S29228: S29807
                                                                                                                                                                                                                                                                                                                              A; Molecule type: mRNA
A; Residues: 1-115 <WIE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;de Sauvage, F.J.; Keshav, S.; Kuang, W.J.; Gillett, N.; Henzel, W.; Goeddel, D.V. Proc. Natl. Acad. Sci. U.S.A. 89, 9089-9093, 1992
A;Title: Precursor structure, expression, and tissue distribution of human guanylin. A;Reference number: A46279; MUID:93028409
                                                                                                                                                                                                                                                                                                                                                                             A; Accession: S29228
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A; Residues: 1-115 <DE1>
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                                                                   of the same receptor
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A; Residues: 1-380 <EIB>
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A;Reference number: G07997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    transmembrane protein - human C;Species: Homo sapiens (min) C;Date: 21-Dec-1996 #sequence. C;Accession: G01639
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GDB:136450; OMIM:139392
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87.5%;
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Pred. No.
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                                                                     form and molecular weight of mature for an intestine-specific receptor of
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                                                                     e form by
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Ü ¤

Query Match Best Local

Similarity

78.3%; 85.7%;

Score Pred.

36; NO.

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C; Function:
A; Description:
C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                       lipopolysaccharide biosynthesis protein lic2B - Haemophilus influenzae (strain : C:Species: Haemophilus influenzae C:Date: 15-Fab-1997 #sequence_revision 13-Mar-1997 #text_change 20-Jun-2000 C:Accession: S71025 M.D.; Moxon, E.R. Mol. Microbiol. 20, 165-174, 1996 A:Title: Tandem repeats of the tetramer 5'-CAAT-3' present in lic2A are required A:Reference number: S71024; MUID:97014379
                                                                                                                                                                                                  A; Experimental
                                                                                                                                 A;Gene: lic2B
                                                                                                                                                                                                                                     A; Cross-references:
                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-266 <HIG>
                                                                                                                                                                                                                                                                                                                                                A; Accession: S71025
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G/Superfamily: basic fibroblast growth factor receptor 1; immunoglobulin homology; pr
G/Keywords: alternative splicing; ATP; autophosphorylation; growth factor receptor; m
F/1-172/Domain: protein kinase homology (fragment) <KIN-
F/23,40,132/Active site: Lys, Glu, Asp #status predicted
F/137,150/Binding site: magnesium (Asn, Asp) #status predicted
F/163/Binding site: phosphate (Tyr) (covalent) (by autophosphorylation) #status predi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEBS Lett. 314, 176-1/8, 1752
A; Title: Identification of four FGF receptor genes
A; Reference number: S27019; MUID:93093167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-172 <EMO>
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C;Superfamily: guanylin
C;Keywords: hormone; intestine
E;1-21/Domain: signal sequence #status predicted <SIG>
E;22-115/Product: guanylin #status experimental <MAT>
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7; Conserv
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87.5%;
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Pred. No. 13;
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fibroblast growth factor receptor - quail C;Species: Coturnix coturnix (quail) C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999 C;Accession: I50128; S42803 R;Marcelle, C.; Eichmann, A.; Halevy, O.; Breant, C.; Le Douarin, N.M.
                                                                                    RESULT
150128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein 18L - Molluscum contagiosum virus 1
N;Alternate names: MCO18L
C;Species: Molluscum contagiosum virus 1
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 11-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:AL162459
A;Experimental source: cultivar C
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical protein F16L2.50 - Arabidopsis thaliana (C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 20-Apr-2000 C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 20-Apr-2000 C;Accession: T47524 R;Jordan, N.; Bangert, S.; Wiedelmann, R.; Voss, H.; Unseld, M.; Mewes, H.W.; Rudd, submitted to the Protein Sequence Database, March 2000
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A;Accession: T30620
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A; Residues: 1-680 <SEN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Accession: T30620
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A; Introns: 233/3;
A; Note: F16L2.50
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A; Residues: 1-633 < JOR>
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A; Accession: T47524
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Similarity 75.0%;
6; Conservative
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6; Conser
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44;
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                                                               A; Status: preliminary
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Matches 6
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C;Accession: B49151
R;Shi, D.L.; Peige, J.J.; Riou, J.F.; DeSimone, D.W.; Boucaut, Development 116, 261-273, 1992
A;Title: Differential expression and regulation of two distinct A;Reference number: A49151; MUID:93130775
A;Accession: B49151
                                                                                                                                                                                                                                                       fibroblast growth factor receptor 4 - Iberian ribbed newt
C;Species: Pleurodeles waltlii (Iberian ribbed newt)
C;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
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C:Superfamily: basic fibroblast growth factor receptor C:Keywords: ATP: growth factor receptor C:Keywords: ATP: growth factor receptor F:283-354/Domain: immunoglobulin homology <IMM>F:484-769/Domain: protein kinase homology <KIN>F:492-500/Region: protein kinase ATP-binding motif
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R;Shi, D.L.; Feige, J.J.; Riou, J.F.; DeSimone, D.W.; Boucaut, J.C. submitted to the EMBL Data Library, March 1992
A;Description: Receptores during early development of the urodele P
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C;Species: Pleurodeles waltlii (Iberian ribbed newt)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 16-Jul-1999
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A;Title: Distinct developmenta
A;Reference number: ISO128; MU
A;Accession: ISO128
                                            A; Molecule type: nucleic acid A; Residues: 1-822 <SHI>
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A; Residues: 1-822 <SHI>
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A; Accession: S19947
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A; Residues: 1-713 <MAR>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 6; Conserv
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protein kinase ATP-binding motif
GB:X65059; NID:g64252; ce: tail-bud
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              78.3%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78.38;
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                      PIDN:CAA46192.1; PID:g64253
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                                                                                                                   A;Molecule type: DNA
A;Residues: 1-399 <BAU>
A;Cross-references: GB:M83563; NID:g155314; PIDN:AAA27582.1; PID:g155315
A;Note: sequence extracted f:om NCBI backbone (NCBIN:77488, NCBIP:77491)
                                                                                                                                                                                                                     R:Baudry, B.; Fasano, A.; Ketley, J.; Kaper, J.B.
Infect. Immun. 60, 428-434, 1992
A;Title: Cloning of a gene (zot) encoding a new toxin produced by Vibrio cholerae.
A;Reference number: A43864; MUID:92112300
A;Accession: A43864
                                                                                                                                                                                                                                                                                                                             C;Species: Vibrio cholerae
C;Date: 10-Mar-1993 #sequencs_revision 18-Nov-1994 #text_change 08-Oct-1999
C;Accession: A43864
                                                                                                                                                                                                                                                                                                                                                                 zonula occludens toxin - Vibrio cholerae C; Species: Vibrio cholerae
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Heidelberg, J.F.; Elsen, J.A.; Nelson, W.C.; Clayton, R.A.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, l, R.R.; Mekalanos, J.J.; Vanter, J.C.; Fraser, C.M. Nature 406, 477-483, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zona occludens toxin VC1458 [imported] - Vibrio cholerae (group O1 strain N16961) C;Species: Vibrio cholerae (group O1 strain N16961) C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 15-Sep-2000 C;Accession: B82197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:AE004224; GB:AE003852; NID:g9655952; PIDN:AAF94615.1; GSPDB:GN001
A;Experimental source: serocroup O1; strain N16961; biotype El Tor
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A; Residues: 1-399 <HEI>
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Best Local (
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Best Local Similarity
Matches 6; Conserv
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Matches 6
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  GGVCVQDG 8
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                                        Similarity
6; Conser
                                    Conservative:
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                                                    76.18;
75.08;
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75.0%;
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85.7%;
                                Score 35; DB
Pred. No. 44;
1; Mismatches
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Pred. No. 56;
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                                Indels
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H.; Dragoi, I.; Sellers,
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A;Gene: mtlD; PA2342
C;Superfamily: conse
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A;Residues: 1-491 <STO>
A;Cross-references: GB:AE004660; GB:AE004091; NID:g9948372; PIDN:AAG05730.1; GSPDB:GN
A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic A;Reference number: A82950; MUID:20437337
                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Accession: D83353
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mannitol dehydrogenase PA2342 [imported] - Pseudomonas aeruginosa (strain PAO1) (Species: Pseudomonas aeruginosa (C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                           .; Lory, S.; Olson, M.V. Nature 406, 959-964, 2000
                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A:Gene: MTH182
A:Start codon: GTG
C:Superfamily: glutamate N-acetyltransferase argJ
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A;Residues: 1-402 <MTH>
A;Residues: 1-402 <MTH>
A;Cross-references: GB:AE000806; GB:AE000666; NID:g2621222; PIDN:AAB84688.1; PID:g262
A;Experimental source: strain Delta H
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Smith, D.R.; Doucette-Stamm, L.A.; Deloughery, C.; Lee, H.; Dubois, J.; Aldredge, T.; Qiu, D.; Spadafora, R.; Vicaire, R.; Wang, Y.; Wierzbowski, J.; Gibson, R.; Jiwani, ki, S.; Church, G.M.; Daniels, C.J.; Mao, J.; Rice, P.; Noelling, J.; Reeve, J.N. J. Bacteriol. 179, 7135-7155, 1997
                                                                                     Query Match
Best Local S
Matches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Complete genome sequence of Methanobacterium thermoautotrophicum Delta H: A;Reference number: A69000; MUID:98037514
A;Accession: C69110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A/Status: preliminary; nucleic acid sequence not shown;
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Best Local Similarity /2...
6; Conservative
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    134
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GGYCIDDG 141
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5; Conserv
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                                                                                   Conservative
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75.08;
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Pred. No. 45;
0; Mismatches
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A.; Larbig,
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Perfect score:
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Match
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Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                        Length DB
URE1_CLOPE
UGS3_PEA
UGS3_PEA
TRS1_HCMVA
BGLS_HANAN
IRS1_HCMVA
PTPN_BOVIN
PTPN_HUMAN
PTPN_MOUSE
                                                                                                                      DDR1_RAT
DDR1_HUMAN
CA11_CHICK
GLTB_AZOBR
PCK5_MOUSE
NTC1_MOUSE
HEM6_HORVU
Y765_HAEIN
                                                                                                                                                                                                FP2_MYTGA
CAH_DUNSA
UGS3_SOLTU
BGL1_ASPAC
EF2_BLAHO
DDR1_RAT
                                                                                                                                                                                                                                                     GUAN_HUMAN
LI2B_HAEIN
ZOT_VIBCH
MEPB_MOUSE
ASPG_FLAME
STHA_MYCTU
          PTPN_RAT
SM5B_MOUSE
                                                                                                   PH4H_CAEEL
AGT2_RAT
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Q17152
Q63474
Q03146
Q08345
P02457
                                                                                                                                                                                                                                                                                Q02747 homo sapien
Q57394 haemophilus
P38442 vibrio chol
                                                                                                                                                                                                                                                                                                                        Description
                                                     O hordeum vul
f haemophilus
c caenorhabdi
rattus norv
clostridium
pisum sativ
human cytom
human cytom
                                                                                                                                                 5 homo sapien
7 gallus gall
5 azospirillu
2 mus musculu
                                                                                                                                                                                                       4 mytilus gal
2 dunaliella
7 solanum tub
5 aspergillus
2 blastocysti
                                                                                                                                                                                      mus musculu
                                                                                                                                                                                                                                            mycobacteri
mytilus gal
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flavobacter
mus musculu
rat cytomeg
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homo sapien
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                                                                                                                                         mus musculu
                  rattus norv
888
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45	44	43	42	41	40	39	38	37	36	35	34
32	32	32	32	32	32	32	32	32	<b>3</b> 3	33	33
69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	71.7	71.7	71.7
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DLL3_HUMAN	DLL3_MOUSE	DLL3_RAT	APB3_HUMAN	APB3_MOUSE	CP11_MICTO	IRF3_CHICK	CHI8_POPTR	GUAN_PIG	NTC3_MOUSE	GLI3_XENLA	JAK1_MOUSE
Q9nyj7 homo sapien	088516 mus musculu	088671 rattus norv		O88888 mus musculu	Q92148 microgadus	Q90643 gallus gall	P16061 populus tri	P79897 sus scrofa	Q61982 mus musculu		P52332 mus musculu

## ALIGNMENTS

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its	- TI TISSUE SPECIFICITI: HIGHLY EXPRESSED IN LEUM AND COLON SIMILARITY: BELONGS TO THE GUANYLIN FAMILY. ALSO SIMILAR TO HEAT STABLE ENTEROTOXINS.	IT STHUKAPES HEAD SERVE THROW OF INTESTAND SOME IT STRUKAPES HEAD SERVE THROW OF INTESTAND SOME IT STRUKAPES HEAD STRUKAPES HE	chemistry 33:13581-13592(1994).	ubetermination of the Solution Structure of the peptide normone guanylin; observation of a novel form of topological	Quan C., Burnie	ITNE=95034794: PubMed=7947768	FEBS Lett. 318:205-209(1993). [4]	"The circulating bloactive form of numan guanylin is a nigh molecular weight peptide (10.3 kDa).";	JM., Forssmann WG.;	Kubn M. Raida M. Adermann K. Schulz-Knanne D. Gerzer R.		Proc. Natl. Acad. Sci. U.S.A. 89:9089-9093(1992).		eddel D.V.;	de Sauvage F.J., Keshav S., Kuang W.J., Gillett N., Henzel W.,		SEQUENCE FROM N.A.	Ę			-93011964; PubMed=1327879;	SEQUENCE FROM N.A.	NCBL_TaxLD=9606;	EdwarfyCla; metazoa; Cibruata; craniata; vercentata; Euchereoscomit; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	man).		(Rel. 40, Last	(Rel. 26, Last	/ Bel 96	GUAN_HUMAN STANDARD; PRT; 115 AA.	RESULT 1

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RESULT 2
LI2B_HAEIN
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Matches 7
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                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-RM / VOT / LINE STRAIN-RM 
                                                                                                                                       EMBL; 254182;
EMBL; U36398;
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01-NOV-1997
01-NOV-1997
                                                                                                               InterPro;
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STRAIN-RM 7004 / S
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Bacteria; Proteobacteria;
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EMBL; M95174; AAA58625.1;
PIR; A46279; A46279.
PIR; S29228; S29228.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content is in no way modified and this starement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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U36398; Ar...

2ro; IPR002654; -...

PF01755; LFS_glycoyl_T; 1.

rferase; Glycosyltransferase; Virulence.

An: 311:1 MW; 0C68AE9BA249BD39
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1GNB; 30-SEP-94.
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    BICSYNTHESIS PROTEIN LIC2B

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Pred. No. 5.5;
0; Mismatches
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GUANYLIN.
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MEDILINE 912.....

RESID A., BAUGY B., Pumplin U....,

KELLEY J.M., Kaper J.B.;

"Vibrio cholerae produces a second enterotoxin, which

"Vibrio cholerae produces a second enterotoxin, which
intestinal tight junctions.";

Intestinal tight junctions.";

Intestinal tight junctions.";

L Proc. Natl. Acad. Sci. U.S.A. 88:5242-5246(1991).

CL -i- FUNCTION: INCREASES THE PERMEABILITY OF THE SMART OF INTERCELLULAR TICE.
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ZOT_VIBCH
ID ZOT_VIBCH STANDARD; PRT; 3
AC P38442; Q9L706; Q9R3V6;
DT 01-OCT-1994 (Rel. 30, Created)
DT 01-OCT-2000 (Rel. 40, Last sequence up
DT 01-OCT-2000 (Rel. 40, Last annotation
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Heidelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Umayam L.A.,

Dodson R.J., Haft D.H., Peterson J.D., Tettelin H., Richardson D.,

STRAINEL TOR NIBYO.

McDosol T., White O.,

McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,

McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,

McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,

McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,

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McDonald L., Utterback T., Fleishmann R.D., Nierman R.D., Nierma
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                                                                                                                                                                                                                    CHARACTERIZATION.
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STRAIN-EL TOR 86015 / S
Kan B., Liu Y.Q., Qi G.
Submitted (JAN-2000) tc
                                                                                                                                                                                                                                                              Nature 406:477-483(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shin H.J., Park Y.C., Kim Y.C., "Cloning and nucleotide sequence analysis of the virulence gene cassette from Vibrio cholerae KNIH002 isolated in Korea."; Misainmurhag Hoiji 35:205-210(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=EL TOR N16961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhi-Yong H., Wei-Jie Z., "Cloning and Expression Submitted (JAN-1999) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted
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STRAIN-CLASSICAL INABA
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Bacteria; Proteobacteria;
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112300; PubMed=1730472;
Fasano A., Ketley J., F
f a gene (zot) encoding
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G.M., Gao
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85.7%;
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PIR; A43864; A43
TIGR; VC1458; -.
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                                              Carcinoma
J. Biol. C
-1- CATALY
                                                                                                                                                                                                                                                                                                MEPB_MOUSE
Q61847;
Q1-NOV-1997
                                                                                                                                                                                                                                                                                                                            MOUSE
J. BIOL. Chem. 271:2271-2278(1996).
-I- CATALYTIC ACTIVITY: HYDROLYSIS OF PROTEIN AND PEPTIDE SUBST PREFERENTIALLY ON CARBOXYL SIDE OF HYDROPHOBIC RESIDUES.
-I- COFACTOR: BINDS ONE ZINC ION.
-I- SUBUNIT: HETEROTETRAMER OF TWO ALPHA AND TWO BETA SUBUNITS!
IS FORMED BY THE NON-COVALENT ASSOCIATION OF TWO DISULFIDE-HETERODIMERS.
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                                                         "A novel meprin beta' mRN/carcinoma cells.";
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                                                                                                                                                                              MEDLINE-94012651;
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                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
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Mus musculus (Mouse)
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an email to license@isb-sib.ch).
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InterPro; IPR002083; -.
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Pfam; PF00008; EGE; 1.
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PRINTS; PRO0480; ASTACIN.
PROSITE; PS00142; ZINC_PROTEA
PROSITE; PS00740; MAM_1; 1.
PROSITE; PS00760; MAM_2; 1.
PROSITE; PS00022; EGF_1; FALS
PROSITE; PS01186; EGF_2; FALS
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HSSP; P28825; 1IA
HEROPS; M12.002;
MEROPS; M12.004;
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SIMILARITY: CONTAINS 1 EGF-LIKE DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. ALTERNATIVE PRODUCTS: 2 ISOFORMS, THE BETA AND DIFFER IN THEIR N.-TERMINUS DUE TO DIFFERENTIAL ALTERNATIVE SPLICING.

TISSUE SPECIFICITY: THE BETA-SUBUNIT IS EXPRESS INTESTIALL BRUSH BORDERS, AND SALIVARY DUCTS. THAS BEEN FOUND IN CARCINOMA CELLS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ARE GLYCOSYLATED
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BETA'-ISOFORM
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                                                                            This SWISS-PROT entry is copyright. It is produced through a content the Ewiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and for entitles requires a license agreement (See http://www.isb-sib.or send an email to license@fisb-sib.ch).
                                                                                                                                                                                                                      Protein Sci. 7:774-781(1998).

-i- FUNCTION: CLEAVES THE GLCNAC-ASN BOND WHICH JOINS OLIGOSACCHARIDES TO THE PEPTIDE OF ASPARAGINE-LINKED GLYCOPROTEINS. REQUIRES THAT THE GLYCOSYLATED ASPARAGINE MOIETY IS NOT SUBSTITUTED ON THE GLYCOSYLATED ASPARAGINE HOTENING.

-i- SAMINO (R1) AND CARBOXYL (R2) TERMINUS.

-i- CATALYTIC ACTIVITY: N4-(BETA-N-ACETYL-D-GLUCOSAMINYL)-L-ASPARAGINE + H(2)O - N-ACETYL-DETA-CLUCOSAMINYLAMINE + L-ASPARTATE.

-i- SUBUNIT: HETEROLIMES OF AN ALPHA AND A BETA CHAINS.

-i- SUBCELLULAR LOCATION: PERIPLASMIC.

-i- SUBCELLULAR LOCATION: DERIPLASMIC.
                                                    EMBL; U08028; AAA68868.1.;
                                                                                                                                                                                                                                                                                                                                                                                                                         "Crystal structure of glycosylasparaginase from Flavobacterium meningosepticum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xuan J., Tarentino A.L., Grimwood B.G., Guan C., van Roey P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      X-RAY CRYSTALLOGRAPHY (2.32 ANGSTROMS).
MEDLINE-98200483; PubMed-9541410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tarentino A.L., Plummer T.H. Jr.;
"The first demonstration of a procaryotic glycosylasparaginase.";
Biochem. Biophys. Res. Commun. 197:179-186(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND PARTI
STRAIN-ELDER / AFCC 33958;
MEDLINE-95142655; Pubmid-7840
Tarentino A.L., Quinones G.,
Plummer T.H. Jr.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 46-59 AND 1.97-211 MEDLINE-94071939; PubMe:d-8250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            meningosepticum glycosylasparaginase: a s and beta subunits.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
N4-(BETA-N-ACETYIGLUCOSAMINYL)-L-ASPARAGINASE PRECURSOR (EC 3.5.1.26)
(GLYCOSYLASPARAGINASE) (ASPARTYIGLUCOSAMINIDASE) (N4-(N-ACETYL-BETA-GLUCOSAMINYL)-L-ASPARAGINE AMIDASE) (AGA).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arch. Biochem. Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Flavobacterium meningosepticum.
Bacteria; CFB group; Flavobacteria; Flavobacteriaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chryseobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Molecular cloning and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ASPG_FLAME
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                                    lary;
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                                29-APR-98.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMe:d-8250923;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMied=7840643;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hauer C.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 34.5;
Pred. No. 52;
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          InterPro; IPR000205;
InterPro; IPR001100;
                                                  fubercuList;
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AX MEDILINE-98295987; PubMed-9634230;
RA COle S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris D.
RA GOrdon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekaia F.,
RA Badcock K., Basham D., Brown D., Chillingworth T., Connor R.,
RA Davies R., Devlin K., Feltwell T., Gentles S., Hamilin N., Holroyd S.,
RA Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J.,
RA Rutter S., Seeger K., Skelton S., Squares S., Sqares R., Sulston J.E.
RA Taylor K., Whitchead S., Barrell B.G.,
"Deciphering the biology of Mycobacterium tuberculosis from the
RA Tomplete genome sequence.",
RA Laure 393:537-544(1988).
C. IFUNCTION: CONVERSION OF NADPH, GENERATED BY PERIPHERAL CATABOLIC ENERGY GENERATION (BY SIMILARITY).
C. ICATALYTIC ACTIVITY: NADPH + NADPH) - NADP(+) + NADH.
C. ICATALYTIC ROCTIVITY: NADPH + NADPH) - NADP(+) + NADH.
C. ICATALYTIC ROCTIVITY: BELONGS TO THE PYRIDINE NUCLEOTIDE-DISULFIDE
C. OXIDOREDUCTASES CLASS-I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
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Best Local
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                                                                   use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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007212;
01-0CT-2000 (Rel. 4
01-0CT-2000 (Rel. 4
01-0CT-2000 (Rel. 4
                                                                                                                          the European Bioinformatics Institute. Thuse by non-profit institutions as long
            EMBL; Z96072; CAB09473.1;
HSSP; P11959; 1EBD.
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01-OCT-2000 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
PROBABLE SOLUBLE PYRIDINE NUCLECTIDE TRANSHYDROGENASE (EC 1.6.1.1)
(STH) (NAD(P)(+) TRANSHYDROGENASE [B-SPECIFIC]).
STHA OR RV2713 OR MTCY05A6.34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae; Mycobacteriaceae; M
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CHAIN
DISULFID
DISULFID
ACT_SITE
SEQUENCE
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                                                                                                                                                         SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
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Rv2713;
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Pred. No.
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BY SIMILARITY
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c; 3D-structure.
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                                                                                 http://www.isb-sib.ch/announce/
                                                                                                        Usage
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BETA CHAIN.
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Best Loc
Matches
                                                                                                                                                            Pfam; PF00008; EGF;
PROSITE; PS00010; AS;
PROSITE; PS00022; EGI
PROSITE; PS01186; EGI
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025464;
30-MAY-2000
30-MAY-2000
01-OCT-2000
ADHESIVE PLAV
(MGFP-2).
                                                                                                                             PROSITE;
PROSITE;
PROSITE;
Glycoprot
SIGNAL
                          CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mytilus galloprovincialis (Mediterranean mussel).
Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia;
Mytiloidea; Mytilidae; Mytilus.
MCBI_TaxID-29158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oxidoreductase; Flavoprotein; NP_BIND 5 35 F NP_BIND 300 310 F NP_BIND 300 SEQUENCE 468 AA; 50754 MW;
                                                                                                                                                                                                                            EMBL; D43794; BAA07852.1; -. InterPro; IPR000561; -.
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MEDLINE-95204464;
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J561; -.
EGF; 11.
J0; ASZ, HYDROXYL; 2
022; EGF_1; 11.
1186; EGF_2; 10.
A; EGF-11ke domain;
1 17
18 473
45 81
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182 117
118 154
155 191
192 228
779 265
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2000 (Rcl. 39, L)
2000 (Rcl. 40, L)
E PLAQUE MATRIX 1
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1 Y., Miki D., Odo
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Last annotation update)
X PROTEIN 2 PRECURSOR (F
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Pred. No. 45;
0; Mismatches
        POTENTIAL.

ADHESIVE P
EGF-LIKE 2
EGF-LIKE 3
EGF-LIKE 4
EGF-LIKE 5
EGF-LIKE 5
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FAD (ADP PART) (BY SIMILARITY).
FAD (FLAVIN PART) (BY SIMILARITY).
; D9E737C41C2898CF CRC64;
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                                                                                                             PLAQUE
                                                                                                                                           Signal;
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                                                                                                             MATRIX
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                                                                                                                                           Hydroxylation
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01-0CT-1996 (Rel. 34
CARBONIC ANHYDRASE (
     SEQUENCE FROM N.A.
MEDLINE-96279304; Pu
Fisher M., Gokhman J
"A salt-resistant pl
                                                                                                                                                                Dunaliella salina.
Eukaryota; Viridiplantae; (
Dunaliellaceae; Dunaliella
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                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
PubMed-8663366;
n I., Pick U., Zamir
plasma membrane cark
                                                                                                                                                                                                                                                                       34, Created)
34, Last sequence update)
34, Last sequence update)
34, Last annotation update)
E (EC 4.2.1.1) (CARBONATE DEHYDRATASE).
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ECF-LIKE 8.
EGF-LIKE 9.
EGF-LIKE 10.
EGF-LIKE 11.
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carbonic anhydrase
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                                                                                                                                                                                              Chlorophyceae; Volvocales;
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Best Local :
     between
the Euro
              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                   01-NOV-1997 (Rel. 35, Cheated)
01-NOV-1997 (Rel. 35, List sequence update)
15-JUL-1999 (Rel. 38, List annotation update)
GLYCOGEN [STARCH] SYNTHINE PRECURSOR (EC 2.4.1.11) (GBSSII) (GRANULE-BOUND STARCH SYNTHASE II) (FRAGMENT).
Solanum tuberosum (Potano).
                                                                                                                                                                                                                                                                                                                                                                                                            Q43847;
01-NOV-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 METAL
SEQUENCE
                                                                                                                                   ÷
                                                                                                                                                                        "Blochemical and molecular characterization synthase from potato tubers."; Plant J. 8:283-294(1995).
                                                                                                                                                                                                                                     SEQUENCE FROM N.A., AND SEQUENCE STRAIN=CV. DESIREE; TISSUE=Tuber; MEDLINE=95400340; PubMed=7670507;
                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplanta:; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicoty:edons; core eudicots; Asteridae; euasterids Solanales; Solanaceae; Solanum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOLTU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is
                                                                                                                                                                                                                           Edwards A., Marshall J.,
                                                                                                                                                                                                                                                                                         NCBI_TaxID=4113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U53811; AAC49378.1; HSSP; P00918; 1CRA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GGVCVQDG
                                                                                                    FUNCTION: ACCOUNTS FOR ONLY 10 TO 15% OF THE TOTAL SOLUBLE: SYNTHASE ACTIVITY IN TUBERS; CATALYTIC ACTIVITY: UDP-GLUCOSE + (1,4-ALPHA-D-GLUCOSYL)[N] UDP + (1,4-ALPHA-D-GLUCOSYL)[N+1].
PATHWAY: STARCH BIOSYNTHESIS.
                                                        FAMILY.
                                                                   SIMILARITY:
                                                                                         SUBCELLULAR LOCATION: CHLOROPLAST/AMYLOPLAST, SOLUBLE AND GRANULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGVCVNTG 79
                                                                                                                                                                                                                                                                                                                                                                                                                                     DITIOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 440
589
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ilarity 75.0%;
Conservative
    Swiss Institute
Bioinformatics
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64257
                                                                                                                                                                                                                                                   AND SEQUENCE OF
TISSUE-Tuber;
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ZINC (CATALYTIC) (BY SIMILA
ZINC (CATALYTIC) (BY SIMILA
ZINC (CATALYTIC) (BY SIMILA
W; OCC2A6F42C121171 CRC64;
     Institute.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 34;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                BACTERIAL/PLANT GLYCOGEN SYNTHASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                        C., Visser R.G.F.,
                                                                                                                                                                                                                                                                66-75
                                                                                                                                                                                                                                                                                                                                                                                                                                   788
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(BY SIMILARITY).
(BY SIMILARITY).
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  restrictions
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outstation -
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Matches
                                                                    EMBL; D64088; BAA10968.1; -.
InterPro; IPR001764; -.
InterPro; IPR002772; -.
Pfam; PF00933; G1yco_hydro_3; 1.
Pfam; PF01915; G1yco_hydro_3-C; 1.
PRINTS; PR00133; GLHYDRLASE3.
PROSTTE; PS00775; G1yCOSYL_HYDROL_F3; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Transit peptide; Chloroplast; ANON TER 1 1 1 TRANSIT <1 65 CH CHAIN 66 788 GL BINDING 310 310 UD VARIANT 71 71 S
  CHAIN
ACT_SITE
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                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
BETA-GLUCOSIDASE 1 PRECURSOR (EC 3.2.1.21) (GIBETA-D-GLUCOSIDE GLUCOHYDROLASE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _ASPAC
                                                                                                                                                                                                                                                                                                                            "Cloning and sequencing a Aspergillus aculeatus."; Gene 173:287-288(1996).
                                                  SIGNAL
                                                              Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                 Kawaguchi T., En
Ooi T., Arai M.;
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM STRAIN=F-50;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Fungi; Ascomycota; Pezizomycotina; Eurotiomycetes; Eurotiales; Trichocomaceae; mitosporic Trichocomaceae; Aspergillus. NCBI_TaxID-5053;
                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=97082984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Aspergillus aculeatus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BGL1_ASPAC
P48825;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; X87988; CAA61241.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            419 GGVCYGDG
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                                                                                                                                                                                                                                                                         SIMILARITY: BELONGS TO FAMILY 3 OF
                                                                                                                                                                                                                                                                                      CATALYTIC ACTIVITY: HYDROLYSIS
GLUCOSE RESIDUES WITH RELEASE O
PATHWAY: CELLULOSE DEGRADATION.
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                                                             Glycosidase;
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                                                             Cellulose degradation;
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                        BETA-GLUCOSIDASE
BY SIMILARITY.
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GLYCOGEN [STARCH] SYNTHASE.
UDP-GLUCOSE (BY SIMILARITY).
S -> D.
S -> D.
; 8D8B90611E862B7B CRC64;
                                                 POTENTIAL.
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Amyloplast; Starch biosynt
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(GLCNAC.
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                                                                                                                                                                                                                                                                                                                                                                          Sumitani J.,
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71;
                                                                                                                                                                                                                                                                         GLYCOSYL HYDROLASES
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                                                           Glycoprotein; Signal.
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or send a
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Submitted (DEC-1995) to the EMBL/GenBank/DDBJ databases.

-I- FUNCTION: THIS PROTEIN PROMOTES THE GTP-DEPENDENT TRANSLOCATION OF THE MASCENT PROTEIN CHAIN FROM THE A-SITE TO THE P-SITE OF THE
                                                                                                                                                                                                                                                                                                                                                                      ELONGATION FACTOR 2 (EF-2) Blastocystis hominis. Eukaryota; stramenopiles;
                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                Pfam; PF00679; EFG_C; 1.
Pfam; PF00009; GTP_EFTU; 1.
PROSITE; PS00301; EFACTOR_GTP;
                                                                                                           EMBL; D79219; BAA11469.1;
HSSP; P07157; 1AIP.
InterPro; IPR000640; -.
InterPro; IPR000795; -.
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                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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30-MAY-2000
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Q17152;
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SUBCELLULAR LOCATION:
PTM: PHOSPHORYLATION
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Similarity 71.4%;
5; Conservative
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. 39, Last annotation (R 2 (EF-2).
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Pfam; PF000754; F5_F8_type_C; 1.

Pfam; PF000754; P5_F8_type_C; 1.

Pfam; PF00069; pkinase; 1.

PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.

PROSITE; PS00239; RECEPTOR_TYR_KIN_II; 1.

PROSITE; PS01285; FA58C_1; 1.

PROSITE; PS01286; FA58C_2; 1.

PROSITE; PS01286; FA58C_2; 1.

PROSITE; PS01011; PROTEIN_KINASE_DOM; 1.

Transferase; Tyrosine-protein kinase; Glycoprotein; Si
Phosphorylation; Transmembrane; Receptor; ATP-binding.
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Q63474;
Q1-NOV-1997
Q1-NOV-1997
Q1-OCT-2000
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InterPro; IPR000719;
InterPro; IPR001245;
InterPro; IPR002011;
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01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 40, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
EPITHELIAL DISCOIDIN DOMAIN RECEPTOR 1 PRECURSOR (EC 2.7.1.112)
(TYROSINE-PROTEIN KINASE CAK) (CELL ADHESION KINASE) (TYROSINE KINASE)
DDR) (DISCOIDIN RECEPTOR TYROSINE KINASE) (PROTEIN-TYROSINE KINASE
                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics use by non-profit institu modified and this statement
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Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Eukheria; Rodentia;
                                                                                                                                                                                                                                                                                                         EMBL; L26525; AAA21089.1; HSSP; P11362; 1FGI.
                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (Some send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sanchez M.P., Tapley P., Saini S.S., He B., Pulido D., Barbaci "Multiple tyrosine protein kinases in rat hippocampal neurons: Isolation of Ptk-3, a receptor expressed in proliferative zone the developing brain.";

Proc. Natl. Acad. Sci. U.S.A. 91:1819-1823(1994).

-i- FUNCTION: MAY BE INVOLVED IN CELL-CELL INTERACTIONS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              European Bioinformatics Institute.
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Sciurognathi; Muridae;
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RESULT
DDR1_MC
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"An Eph-related receptor protein tyrosine kinase gene Pexpressed in the developing mouse hindbrain.";

Oncogene 7:2499-2506(1912).

-i- FUNCTION: MAY BE INVOLVED IN CELL-CELL INTERACTION RECOGNITION MAY BE INVOLVED IN CELL-CELL INTERACTION RECOGNITION (ST. SINILARITY).

C-i- CATALYTIC ACTIVITY: ATP + A PROTEIN TYROSINE - ADE PROTEIN TYROSINE PHOSPHATE.

C-i- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

C-i- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 6
                                                                                                                         SEQUENCE OF 766-822 FROM N.A.
STRALN-C57BL; TISSUE-Embryonic brain;
MEDLINE-93096484; PubMed-1281307;
                                                                                                                                                                                                                                                                                                                             01-OCT-1994 (Rel. 30, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
01-OCT-2000 (Rel. 40, Last annotation update)
EPITHELIAL DISCOIDIN DOWAIN RECEPTOR 1 PRECURSOR (EC 2.7.1.112)
(TYROSINE-PROTEIN KINASE CAK) (CELL ADHESION KINASE) (TYROSINE KINASE
DDR)_(DISCOIDIN RECEPTOR TYROSINE KINASE) (PROTEIN-TYROSINE KINASE
                                                                                                                                                                        Perez J.L., Jing S.Q., Wong T.W.; "Identification of two !soforms of the coexpressed in breast tumor cell lines. Oncogene 12:1469-1477(1996).
                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
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CARBOHYD
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MEDLINE-96204002;
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F5/8 TYPE C
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EPITHELIAL DISCOIDIN DOMAIN RECEPTOR 1.
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Score 34; Pred. No.

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InterPro; IPR000421; -.
InterPro; IPR000719; -.
InterPro; IPR0002011; -.
InterPro; IPR002011; -.
InterPro; IPR002011; -.
Pfam; PF00754; F5_F8_type_C; 1.
Pfam; PF00069; pk.inase; 1.
PROSITE; PS00107; PROTEIN_KINASE_ATP; FALSE_PROSITE; PS00109; PROTEIN_KINASE_TYR; 1.
PROSITE; PS00139; RECEPTOR_TYR_KIN_II; 1.
PROSITE; PS00239; RECEPTOR_TYR_KIN_II; 1.
PROSITE; PS01285; FA58C_1; 1.
PROSITE; PS01286; FA58C_2; 1.
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SIMILARITY: BELONGS TO
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TISSUE SPECIFICITY: THE PREDOMINANT ISOFORM CAK I, IS E DEVELOPING EMBRYO AND ADULT BRAIN; CAK II IS EXPRESSED EPITHELIAL CELLS.
SIMILARITY: WITH THE CONSERVED CATALYTIC DOMAINS OF TYFKINASES.
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MGI:99216; Cak.
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PROTEIN KINASE.
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ATP (BY SIMILAR:
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GLY/PRO-RICH.
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MISSING (IN ISOFORM); DBB7FE03DDD79510
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POTENTIAL.
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EPITHELIAL DISCOIDIN DOMAIN RECEPTOR
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CAK II
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MEDLINE-94043265; PubMed-8226977;
di Marco E., Cutuli N., Guerra L., Cancedda
"Molecular cloning of trkE, a novel trk-rel
kinase receptor isolated from normal human
expressed by normal human tissues.";
J. Biol. Chem. 268:24290-24295(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein."
FEBS Lett
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MEDLINE-94134417; PubMed-8302582;

Perez J.L., Shen X., Finkernagel S., Sciorra L., Jenkins N.A.,

Gilbert D.J., Copeland N.G., Wong T.W.;

"Identification and chromosomal mapping of a receptor tyrosine kinase
with a putative phospholipid binding sequence in its ectodomain.";

Oncogene 9:211-219(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "A receptor tyrosine kinase found in breast carcinoma extracellular discoidin I-like domain."; Proc. Natl. Acad. Sci. U.S.A. 90:5677-5681(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-96204002; pubMed-8622863; perez J.L., Jing S.Q., Wong T.W.; "Identification of two isoforms of the coexpressed in breast tumor cell lines. Oncogene 12:1469-1477(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Ve
Mammalia; Eutheria; Primates; Catarrhini;
NCBI_TaxID=9606;
                                                            Laval S., Butler R.,
Ganesan T.S.;
                                                                                                                         MEDLINE-95151638;
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MEDLINE=97131588; PubMed-8977099;
MENDINE=97131588; PubMed-8977099;
Sakuma S., Tada M., Saya H., Sawamura
Sakuma S., Tada M., Saya H., Sawamura
"Receptor protein tyrosine kinase DDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-93296201; PubMed-8390675; Johnson J.D., Edman J.C., Rutter W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Placenta;
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"Isolation and o
                                                                                                                                                                              TISSUE-Ovary;
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e from an ovarian
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of an epithelial-specific receptor cancer cell line.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tyrosine kinase.";
                                                                                                       Poulsom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cooke
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cell Growth Differ. 5:1173-1183(1994).
-I- FUNCTION: MAY BE INVOLVED IN CELL-CELL INTERACTIONS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. between the Swiss Institute of Bio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN.
SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; CAK I (SHOWN HERE) AND CARE PRODUCED BY ALTERNATIVE SPLICING. THEY ONLY DIFFER BY ABSENCE OF A 37 RESIDUES SEGMENT.
TISSUE SPECIFICITY: EXPRESSED AT LOW LEVELS IN MOST ADULT AND IS HIGHEST IN THE BRAIN AND LUNG. ABUNDANT IN BREAST CAND IS HIGHEST IN THE BRAIN AND LUNG.
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CATALYTIC ACTIVITY:
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TO THE INSULIN RECEPTOR FAMILY OF TYROSINE.
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IN BREAST CARCINOMA
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JSITE: Pb.
Lransferase: Ty.
Phosphorylation: 1.
Alternative splicing.
Alternative splicing.
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185 Pfam; PF00754; F5\_F8\_type\_C; 1.

Pfam; PF00069; PkInase; 1.

PROSITE; PS00107; PROTEIN\_KINASE\_TYR; 1.

PROSITE; PS00109; PROTEIN\_KINASE\_TYR; 1.

PROSITE; PS00219; PROTEIN\_KINASE\_DOM; 1.

PROSITE; PS00239; RECEPTOR\_TYR\_KIN\_II; 1

PROSITE; PS01285; FA58C\_1; 1.

PROSITE; PS01286; FA58C\_2; 1. InterPro; InterPro; InterPro; DOMAIN DOMAIN EMBL; Transferase; Tyrosine-protein InterPro; L11315 AAA02866.1;
L20817 AAA518019.1;
U48705 AAC59917.1;
X98208 CAA66871.1;
X99023 CAA66871.1;
X99025 CAA66871.1;
X99025 CAA66871.1;
X99026 CAA66871.1;
X99027 CAA66871.1;
X99028 CAA66871.1;
X99029 CAA66871.1;
X99029 CAA66871.1;
X99031 CAA66871.1;
X99031 CAA66871.1;
X99033 CAA66871.1; P11362; ; IPR000421; ; IPR000719; ; IPR001245; ; IPR002011; AAB05208. CAA52915. CAA82335. Transmembrane; JOINED.
JOINED. POTENTIAL.
EPITHELIAL DISC
EXTRACELLULAR (
POTENTIAL. CYTOPLASMIC () F5/8 TYPE C () POTENTIAL). GLY/PRO-RICH. GLY/PRO-RICH. kinase; Glyce; Receptor; 1. Glycoprotein; Signal;
tor; ATP-binding; FALSE\_NEG DISCOIDIN DOMAIN LAR (POTENTIAL). (PHOSPHOLIPID-BINDING (POTENTIAL) RECEPTOR

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SEQUENCE OF 1200-1205.

MEDLINE=72243016; PubMed=5047697;

Eyre D.R., Glimcher M.J.;

"Evidence for a previously undetected sequence at the carboxyterminus of the alpha 1 chain of chicken bone collagen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-JUL-1986 (Rel. 01
01-OCT-1989 (Rel. 12
15-JUL-1999 (Rel. 38
COLLAGEN ALPHA 1(I)
                                                                                                                                                                                                              "Amino acid sequence of chick skin collage complete primary structure of the helical collagen alpha 1(I) chain."; Biochemistry 21:2048-2055(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIINE-88056316; PubMed-3678834; Finer M.H., Boedtker H., Doty P.; "Construction and characterization of cDNA clones of the chicken pro alpha 1(I) collagen mRNA."; Gene 56:71-78(1987).
                                                                                                                                                                                                                                                                                                                                                         Highberger J.H., Corbett Kang A.H., Gross J.;
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 152-1187.
MEDLINE-82231995; Pub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-88007542; PubMed-2820966; Finer M.H., Aho S., Gerstenfeld L.C., "Unusual DNA sequences located within first intron of the chicken pro-alpha J. Biol. Chem. 262:13323-13332(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; (Archosauria; Aves; Neognathae;
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Corbett C., Dixit
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12, Last sequence update)
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I) CHAIN PRECURSOR.
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Neognathae; Galliformes; Phasianidae; Phasianinae;
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Pred. No.
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the promoter region a
1(I) collagen gene.";
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PIR; A27179; A27179.
PIR; A29367; A29367.
InterPro; IPR000087; -.
InterPro; IPR001007; -.
InterPro; IPR001007; -.
Pfam; PF01410; COLFI; 1.
Pfam; PF01391; Collagen; 18.
Pfam; PF00393; vwc; 1.
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EMBL; M17838; AAA48704.1; J
EMBL; W00401; CAA23695.1; -
EMBL; M10571; AAA48671.1; A
EMBL; M17607; AAA48672.1; -
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Extracellular matrix; Conn
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Showalter A.M., Pesciotta D.M., Eikenberry E.F., Yamamoto T., Pastan I., Decrombrugghe B., Fietzek P.P., Olsen B.R.;
"Nucleotide sequence of a collagen cDNA-fragment coding for the carboxyl end of pro alpha 1(I)-chains.";
EEBS Lett. 111:61-65(1980).
I-FUNCTION: TYPE I COLLAGEN IS A MEMBER OF GROUP I COLLAGEN (FIBRILLAR FORMING COLLAGEN).
I-SUBUNIT: TRIMERS OF ONE ALPHA 2(I) AND TWO ALPHA 1(I) CHAINS OF TISSUE SPECIFICITY: FORMS THE FIBRILS OF TENDON, LIGAMENTS A BONES. IN BONES THE FIBRILS ARE MINERALIZED WITH CALCIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. Biophys. Res. Commun. [5]
SEQUENCE OF 981-1453 FROM N.A. MEDLINE-81160715; PubMed-69278 Fuller F., Boedtker H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Sequence determination and analysis of the 3' region of chicken alpha 1(I) and pro-alpha 2(I) collagen messenger ribonucleic actincluding the carboxy-terminal propeptide sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=80134546; PubMed=6987088;
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                    73.9%;
85.7%;
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                                                                   HYDROXYLATION (POTENTIAL).
HYDROXYLATION (POTENTIAL).
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HYDROXYLATION (ONLY 3-HYDROXYPRO AND THE ONLY HYDROXYLATED PRO IN POSITION X (IN THE G-X-Y UNIT IN THE ALPHA 1(I) CHAIN)).

F -> L (IN REF. 5).

O -> H (IN REF. 6).

WW. 3BC6152134271F4D CRC64;
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                    Score 34;
Pred. No.
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Similarity 6; Conserv

Conservative

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Mismatches

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Gaps

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Oy 2 GVCVQDG B
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Search completed: June 1

Search completed: June 13, 2001, 14:21:46 Job time:  $806\ \text{sec}$ 

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GenCore version Copyright (c) 1993 - 2000

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Q02529 oryzias lat
Q14964 homo sapien
Q68405 human cytom
Q91zu6 arabidopsis
Q11308 molluscum c
Q98187 molluscum c
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Q90330 coturnix co
Q91288 pleurodeles
Q90413 brachydanio
Q80102 bacteriopha
Q9ve06 drosophila
Q9yla8 drosophila
Q9yla8 drosophila
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O9pk45 chlamydia m
O9jj51 mus musculu
Q9qyv1 rattus norv
Q13086 homo sapien
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## ALIGNMENTS

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Q9PK45;
01-OCT-2000
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                                                                                                                                                                           "Genome sequence of an obligate intracellular pathogen of humans: Chlamydia trachomatis.";
Science 282:754-759(1998).
EMBL; AE001308; AAC67944.1; -.
SEQUENCE 196 AA; 21978 MW; E0B6CFFD52F93073 CRC64;
                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

STRAIN-D/UW-3/CX;

MEDLINE-99000809; PubMed-9784136;

Stephens R.S., Kalman S., Lammel C.J., Formuta B.W.P., Olinger L., Tatusov R.L.,
                                                                                                                                                                                                                                                                                             Chlamydia trachomatis.
Bacteria; Chlamydiales;
NCBI_TaxID=813;
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01-NOV-1998 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
MAF-TYPE PROTEIN.
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87.5%;
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D., Koonin E.V.,
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Elb D.W., Holling T.M., Zwijsen A., Dewulf N., de Groot E., van den Eijnden-van Raalj A.J.M., Huylebroeck D., Martens G. Expression of the foll.lstatin/EGF-containing transmembrane M7365 (tomoregulin-1) during mouse development.";

Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                     TR-1.
Mus musculus (Mouse).
Mus myota; Metazoa; Chordata; (
"" raryota; Metazoa; Rodentia;
                                                                                                                                                                                                                                                                                                                                                              Q9JJS1
Q9JJS1;
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Read T.D., Brunham R., Shen C., Gill S.R., Heidelberg J.F., White Hickey E.K., Peterson J., Umayam L.A., Utterback T., Berry K., Bass S., Linher K., Weldman J., Khouri H., Craven B., Bowman C., Dodson R., Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty G., Salzberg S.L., Elsen J., Fraser C.M.;

Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.

EMBL; AB002331; AAF39457.1; -.
                                                                                             SEQUENCE
                                                                                                                                                                                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
[1]
                                                                                                                                                                                                                                                                                                               01-OCT-2000 (TrembLrel.
01-OCT-2000 (TrembLrel.
01-OCT-2000 (TrembLrel.
TOMOREGULIN-1 PRECURSOR
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Read T.D., Brunham R.C., Shen C., Gill S.R., Heidelberg
White O., Hickey E.K., Peterson J., Utterback T., Berry
Linher K., Weidman J., Khouri H., Craven B., Bowman C.,
Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty G.,
Eisen J., Fraser C.M.;
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                                                                                                                                                          EMBL; AJ400622; CAB90827.1;
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Bacteria; Chlamydiales;
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354 AA;
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Pred. No.
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K., Bass
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Q1-NOV-1996;
Q1-NOV-1996;
Q1-OCT-2000;
                                           Signal;
SIGNAL
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Eukaryota; Metazoa; (
Mammalia; Eutheria; I
NCBI_TaxID=10116;
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Q9QYV1;
01-MAY-2000
01-MAY-2000
01-OCT-2000
                                                                               PRINTS; PR00290; KAZALINHBTR. PROSITE; PS00022; EGF_1; UNKI PROSITE; PS01186; EGF_2; 1.
                                                                                                                                                                                                                               Eib D.W., Martens G.J.;
Submitted (APR-1995) to t
EMBL; U19878; AAA64622.1;
HSSP; P00998; 1TGS.
                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9606;
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                                                                                                                                                PFAM; PF00050; kazal;
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Submitted (NOV-1999) to the EMBL/GenBank/DDBJ EMBL; AJ250730; CAB60131.1; -.
HSSP; P00998; 1TGS.
INTERPRO; IPR000561; -.
INTERPRO; IPR002350; -.
PFAM; PF00050; kazal; 2.
                                                                                                                                                                                                                                                                                                                   TISSUE-BRAIN;
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PS01186;
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Primates;
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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01-WOV-1996 (TrEMBL
01-WOV-1996 (TREMBL
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FIBROBLAST GROWTH F
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2000 (TrEMBLrel. 15, Last annotation update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
FIBROBLAST GROWTH FACTOR RECEPTOR CPE-FGFR.
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Galliformes; Phasianidae; Phasianinae;
                                        MEDLINE=93093167; PubMed=1459248;
Emor1 Y., Yasuoka A., Saigo K.;
"Identification of four FGF recep
                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neotele Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha; Beloniformes; Adrianichthyidae; Oryzinae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "[Analysis of fibroblast growth factor receptor genes expressed retinal pigment epithelium of chick embryos by reverse transcrip polymerase chain reaction].";
J. Jpn. Ophthalmol. Soc. 98:625-629(1994).
HSSP, P12931; 1FMK.
                                                                                                                                                                                                                                                                                            Oryzias latipes (Medaka fish).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q02529
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PRINTS; PR00109; TYRKINASE.
PROSITE; PS50011; PROTEIN, KINASE_DOM; 1.
SEQUENCE 138 AA; 16109 MW; 74465170F678AE58 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-94346318; PubMed-8067293;
                                                                                             SEQUENCE FROM N.A. MEDLINE-93093167;
                                                                                                                                                                       NCBI_TaxID=8090;
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6; Conser
  314:176-178(1992)
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(TrEMBLrel. 01, Last sequence update)
(TrEMBLrel. 15, Last annotation update)
GROWTH FACTOR RECEPTOR (EC 2.7.1.112) (FGF-R)
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85.7%;
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                                                  receptor
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MEDLINE-97237046; PubMed-9119394;

Stankovic T., Byrd P.J., Cooper P.R., McConville C.

Riley J.H., Watts G.D.J., Ambrose H., McGuire G., S

Sutcliffe A., Mills T., Taylor A.M.R.;

"Construction of a transcription map around the ger

telanglectasia: identification of at least four not

Genomics 40:267-276(1997).

EMBL; X99962; CAA68227.1; -.

HSSP; P05713; 3RAB.
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014964;
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Homo sapiens (Homan).
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01-NOV-1996 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
RAB-RELATED GTP-BINDING
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INTERPRO; IPRO01245; -.
PFAM; PF00069; pkinase;
PRINTS; PR00109; TYRKIN
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PIR; S27022; S27022.
HSSP; P12931; 1FMK.
                                                                                                                                      PFAM; PF00071;
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58 GYCTQDG
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182 GEICIQDG
                    1 GGVCVQDG
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5; Conser
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PS00109; PROTEIN_KINASE_TYR; 1.
PS50011; PROTEIN_KINASE_DOM; 1.
; Tyrosine-protein kinase; ATP-binding;
ylation; Growth factor binding.
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172 AA;
                                           Conservative
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PROTEIN (FRAGMENT).
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                                        Score 36; DB Pred. No. 19; 2; Mismatches
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ATP (BY SIMILARITY).
PHOSPHORYLATION (AUTO-)
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                                                                                             AA9A29731F42B8F5 CRC64;
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novel genes.";
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01-NOV-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jordan N
Rudd S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplanta:: Embryophyta; Trachec
Magnoliophyta; eudicotyledons; core eudicots;
Brassicales; Brassicace:: Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-2000 (TrEMBLrel. 01-OCT-2000 (TrEMBLrel. 01-OCT-2000 (TrEMBLrel. HYPOTHETICAL 71.7 KDA P.
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Cha T.A., Tom E., Kemble G.W., Duke G.M.,
"Human cytcmegalovirus cilnical isolates c
found in laboratory strains.";
J. Virol. 70:78-83(1996).
EMBL; U33331; AAA85892.1; -..
SEQUENCE 336 AA; 35116 MW; 9F865E5019F
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Q68405;
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NCBI_TaxID=10359;
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Viruses; dsDNA viruses,
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                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=3702;
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                                                                                                                                 GGCCVDDG
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                                                                                                                                                                                                        6; Conserv
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(TrEMBLrel.
                                                                                                                                                                                                          Conservative
                                   PRELIMINARY;
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Cytomegalovirus.
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e; eurosids II;
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RESULT
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Best Local Similarity
Matches 6; Conserv
Moss B.;

Submitted (JUN-1996) to the EMBL/Genbaum, ---
EMBL; U60315; AAC55146.1; --
INTERPRO; IPR002221; -
INTERPRO; IPR002221; -
PROSITE; PS00317; 4_DISULFIDE_CORE; UNKNOWN_1.
SROUENCE 680 AA; 72398 MW; 12CB3BD9E61AA72B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q98187;
Q98187;
Q1-FEB-1997
Q1-FEB-1997
Q1-MAY-2000
                                                                                                                                                                                                                       "Genome sequence of a human tu
specific host response-evasion
Science 273:813-816(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                        Molluscum contagiosum v
Viruses; dsDNA viruses,
                                                                                                                                                             Senkevich
                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=96325459; PubMed=8670425;
Senkevich T.G., Bugert J.J., Sisler J.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOTATIIIA M., AGROMBAYOR M., NUNEZ A., FUNES J.M., VATAS A.J.,
LOPEZ ESTEADANZ J.L., COLLAGO M., PAYON M., MATTIN-GALLARDO
SUBMILTED (JAN-1997) to the EMBL/GenBank/DDBJ databases.
EMBL, U86894, AAB57938.1; -
INTERPRO, IPRO02221; -
PROSTITE; PS00317; 4_DISULFIDE_CORE; UNKNOWN 1.
PROSTITE; PS00317; 4_DISULFIDE_CORE; UNKNOWN 1.
                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                    Moss B.;
                                                                                                                                                                                                                                                                                                                                                                                    Molluscipoxvirus:
NCBI_TaxID=10280;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=97093414; PubMed=8938976;
Martin-Gallardo A., Moratilla M., Fur
Varas A.J., Collado M., Valencia A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUL-1997 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
SIMILAR TO VARIOLA C15L
B-M,N,L.8.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                               Bugert
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85.7%;
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s, no F
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                                                                                                                                                             J.J.,
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RNA stage;
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Last annotation updat
VACCINIA F11L.
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                                                                                                                                                             Sisler
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A., Lopez-Estebaranz J.
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, Martin-Gallardo
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Poxviridae;
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Poxviridae; Chordopoxvirinae;
                                                                                                                                                                                                                                              poxvirus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
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                                         CRC64;
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                                                                                                                                                          Ε.V.,
                                                                                                                                                                                                                                                                                                     Ε.Υ.,
                                                                                                                                                                                                                                                             prediction
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RESULT Q91288 ID Q91288 OS P F OS C F RN
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Best Local S
Matches 6
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Best Loc
Matches
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INTERPRO; IPRO01245; ...
INTERPRO; IPRO03006; ...
PFAM; PF00047; 19; 2.
PFAM; PF00069; pkinase; 1.
PRINTS; PR00109; TYRKINASE.
 Amphibla; Batrachia; (Pleurodeles. NCBI_TaxID=8319; [1]
                                                                                                                                                                                                                                                                      CHAIN
SEQUENCE
                                                                                                                                                                                                                                                                                                              PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                                                           Signal.
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Q90330;
                               Pleurodeles waltlii (Iberian ribbed newt).
Eukaryota; Metazoa; Chordata; Craniata; Vertel
Amphibia; Batrachia; Caudata; Salamandroidea;
                                                              01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 13, Last sequence update)
01-NAY-2000 (TrEMBLrel. 13, Last annotation update)
FIBROBLAST GROWTH FACTOR RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-94215505; PubMed-8162862;
Marcelle C., Eichmann A., Halevy O.,
"Distinct developmental expression o
                                                                                                                                                                                                                                                                                                                                                                                                            factor receptor.";
Development 120:683-694(1994).
EMBL; X76885; CAA54213.1; -.
HSSP; P12931; 1FMK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
FIBROBLAST GROWTH FACTOR RECEPTOR PRECURSOR.
                                                                                                                     Q91288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=93934;
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                                                                                                                                                                                             GVCVQDG 8
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                                                                                                                                                                                                                                                                                                             PS00107; PROTEIN_KINASE_ATP;
PS00109; PROTEIN_KINASE_TYR;
PS50011; PROTEIN_KINASE_DOM;
                                                                                                                                                                                                                                                                  1
20
713
                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                  Conservative
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713
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85.7%;
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MEDLINE-96172998; PubMed-8589434;

A Thisse B., Thisse C., Weston J.A.;

I Novel FGF receptor (Z-FGFR4) is dynamically expressed in I neurectoderm during early zebrafish embryogenesis.";

Dev. Dyn. 203:377-391(1955).

R EMBL; U2B-968616.1; -.

R HSSP; P08631; 1AD5.

R HSSP; P08631; 1AD5.

R PITERPRO; IPR000719; -.

R INTERPRO; IPR0001245; -.

R INTERPRO; IPR001245; -.

R INTERPRO; IPR003006; -.

R FPAM; PF00069; pkinase; 1.

R PFAM; PF00069; pkinase; 1.

R PROSITE; PS001109; PROTEIN_KINASE_ATP; 1.

R PROSITE; PS001109; PROTEIN_KINASE_DOW; 1.

R PROSITE; PS0011; PROTEIN_KINASE_DOW; 1.

R PROSITE; PS0011; PROTEIN_KINASE_DOW; 1.
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FIBROBLAST G
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Eukaryota; Metazoa; Chordata; Craniata; Verte
Actinopterygii; Neopterygii; Teleostei; Eutel
Cypriniformes; Cyprinidae; Rasborinae; Danio.
NCBI_TaxID-7955;
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PFAM; PF00069; pkinase; 1.

PRINTS; PR00109; TYRKINASE.

PROSITE; PS00107; PROTEIN_KINASE_ATP; 1.

PROSITE; PS00109; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00011; PROTEIN_KINASE_DOM; 1.

PROSITE; PS00011; PROTEIN_KINASE_DOM; 1.
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INTERPRO; IPRO01245; -.
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t of the urodele
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Search completed: June 13, 2001, 14:20:34 Job time: 734 sec

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Post-processing: Minimum Match 0%
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Perfect score:
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2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
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   June 13, 2001, 14:16:35; Search time 118.55 Seconds (without alignments) 1.296 Million cell updates/sec
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Copyright (c) 1993 - 2000 Compugen
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US-08-36-343A-17
US-08-336-343A-17
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US-08-101-191A-25
US-08-836-567-6
US-08-836-567-8
US-08-445-461-4
US-08-447-314-4
US-08-447-314-4
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US-08-447-314-4
US-08-47-314-1
US-08-47-11-770-2
US-08-701-191A-13
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Conservative

80.4%; 75.0%;

Score 37; DB Pred. No. 38; 1; Mismatches

DB 3;

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Database

Minimum DB Maximum DB

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Sequence 17, Appl	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 8, Appli	Sequence 8, Appli	•	Sequence 8, Appli	Sequence 2, Appli	Sequence 16, Appl	Sequence 17, Appl	Sequence 7, Appli	Sequence 6, Appli	Sequence 1, Appli					

ALIGNMENTS

## ; MOLECULE TYPE: US-08-468-846-2 Sequence 2, Application Patent No. 6074839 GENERAL INFORMATION: TELEFAX: 201-994-1744 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: FILING DATE: 08-MAR-1994 ATTORNEY/AGENT INFORMATION: NAME: FETTATO, Gregory D. REGISTRATION NUMBER: 36,134 REFERENCE/DOCKET NUMBER: 325800-465 TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700 APPLICATION NUMBER: US/08/468,846 FILING DATE: 06-JUN-1995 CLASSIFICATION: 514 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/208,008 FILING DATE: 08-MAR-1994 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Rel CURRENT APPLICATION DATA: TITLE OF INVENTION: TRANSFORMING GROWTH FACTOR ALPHA NUMBER OF SEQUENCES: 15 CORRESPONDENCE ADDRESS: APPLICANT: Meissner, Paul APPLICANT: Fuldner, Rebecca APPLICANT: Fei-Wei, Ying APPLICANT: Adams, Mark STREET: 6 Becker F. CITY: Roseland STATE: New Jersey COUNTRY: USA TELEPHONE: ZUL - TELEPH TYPE: amino acid TOPOLOGY: linear ADDRESSEE: 2, Application US/08468846 5. 6074839 07068 380 amino acids 6 Becker Farm Road PatentIn Release #1.0, Version #1.30 STUART & OLSTEIN protein BAIN, GILFILLAN, CECCHI.

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85 GGVCKEDG 92

GGVCVQDG 8

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RESULT 3
US-07-903-029-5
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 115 amino acids
TYPE: AMINO ACID
TYPE: AMINO ACID
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US-07-903-029-4
                                                                                                                                                                       Sequence 5, Application US/07903029
Patent No. 5969097
GENERAL INFORMATION:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                    TITLE OF INVENTION: Human Guanylin NUMBER OF SEQUENCES: 6 CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein -903-029-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Bennett, Dennis A. 547
REGISTRATION NUMBER: 34.547
REFERENCE/DOCKET NUMBER: 07-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314)694-5402
                                                                                                                            APPLICANT:
                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/0:
FILING DATE: 19920623
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
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APPLICANT:
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COUNTRY:
                            CITY: St.
                                              STREET:
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                                                           DDRESSEE:
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          Missouri
                                       E: Dennis A. Bennett, Monsanto Co., 800 N. Lindbergh Blvd.
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Currie, Mark C.
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800 N. Lindbergh Blvd.
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Currie, Mark C.
Fok, Kam F.
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; LENGTH: 115 amino ac
; TYPE: AMINO ACID
; TOPOLOGY: linear
; MOLECULE TYPE: Peptide
US-07-903-029-5
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                                                                                         TELEFAX: 415-857-0663 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 115 amino acids
                                                                                                    REGISTRATION NUMBER: 31,822
REFERENCE/DOCKET NUMBER: AV
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-494-7622
TELEPAX: 415-857-0663
                                                                                                                                                                                             APPLICATION NUMBER: US/08/414,926A FILING DATE: March 31, 1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: CSEIT, LUBRIN
                                    SEQUENCE CHARACTERISTICS:
LENGTH: 336 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Spaete, Richard
APPLICANT: Cha, Tai-An
TITLE OF INVENTION: NOVEL HUMAN CYTOMEGALOVIRUS
NUMBER OF SEQUENCES: 27
CORRESPONDENCE ADDRESS:
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/903,029
FILING DATE: 19920623
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
ATTORNEY/AGENT INFORMATION:
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REFERENCE, DOCKET NUMBER: 07-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314,694-5402
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ZIP: 943
                  TOPOLOGY:
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TO NO: 5:
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Pred. No.
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                                                                                                                            ; NAME/KEY: Protein
; LOCATION: 1..336
; OTHER INFORMATION:
US-08-926-922-26
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                                                                  Query Match
Best Local Similarity
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Best Local :
                                                         Matches
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                     FEATURE:
                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 510-834-1448
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/926,9
FILING DATE: September 10, 1997
CLASSIFICATION: 336
ATTORNEY/AGENT INFORMATION:
NAME: CSETT, LUBBN
NAME: CSETT, LUBBN
NAME: CSETT, LUBBN
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                IMMEDIATE SOURCE:
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CLONE: tol.22
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hes 6; Conserv
72 GGVCGEDG 79
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                                                                                                                                                                                                                                                                                                                                                                      NAME: Cserr, Luann
REGISTRATION NUMBER: 31,822
                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
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                         1 GGVCVQDG 8
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                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Floppy disk
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75.0%;
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75.08;
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                                                      Score 36; DB Pred. No. 50; 1; Mismatches
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Pred. No. 50;
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US-09-253-682-26
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                                                                                                                                            US-08-624-601-8
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Patent No. 6040170
Patent INFORMATION:
                                                                                           Sequence 8, Application patent No. 5882653
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 510-839-7810 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
             APPLICANT: Kaper Dr., James B.
APPLICANT: Levine Dr., Myron M
TITLE OF INVENTION: Vibrio cho
TITLE OF INVENTION: (CVD112 an
TITLE OF INVENTION: of making
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Spacte, Richard APPLICANT: Cha, Tai-An TITLE OF INVENTION: NOVEL | NUMBER OF SEQUENCES: 27
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: September 10
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMMEDIATE SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
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                                                                                                                           Application US/08624601
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                                                                                                                                                                                                                                                                            Conservative
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
             Vibrio cholerae Ol (CVD111) and non-Ol (CVD112 and CVD112RM) serogroup vaccine strains, methods of making same and products thereof
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ber 10, 1997
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COUNTRY: U ZIP: 20005

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1100 New York Ave. N.W. Suite 300 East

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                                                                                                                                                                                                                                                                                                                                                                           Sequence 17, Application US/08336343A
                                                                                                                                                                                                                                                                                                                                           Tatent No. 5677144
GENERAL INFORMATION:
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                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 08-NOV-199
                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC:DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
TOPOLOGY: lin
MOLECULE TYPE:
                                                                                                                                                                                                                                                                            APPLICANT: Ullrich, Axel APPLICANT: Alves, Frauke TITLE OF INVENTION: CCK-2, NUMBER OF SEQUENCES: 43
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ORGANISM: Vibrio che
STRAIN: El Tor 7946
                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS
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IMMEDIATE SOURCE:
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Schneller Dr., John W.
REGISTRATION NUMBER: 26,031
REFERENCE/DOCKET NUMBER: BAMCZ0019P2
TELECOMMUNICATION INFORMATION:
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                                                                              SOFTWARE:
                                                                                                                                                                             COUNTRY:
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             CLASSIFICATION:
                                                                                                                                                                                                               CITY: New York
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CLASSIFICATION:
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TRY: U.S.A.
10036-2711
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1155 Avenue of the Americas
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                                                                               PatentIn Release #1.0, Version #1.30
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                                            US/08/336,343A
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; Sequence 18, Application US/08336343A
; Patent No. 5677144
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Best Local S
Matches 6
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                           TOPOLOGY: un
                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 50 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/336,343A
FILING DATE: 08 NOV-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: COTUZZÍ, LAUTA A.
REGISTRATION NUMBER: 30,742
REFERENCE/DOCKET NUMBER: 76
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ullrich, Axel APPLICANT: Alves, Frauke
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10036-2711
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TELEFAX: 66141 PENNIE
TELEFAX: 66141 PENNIE
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                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 30,
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TELEFAX: (212) 869-9741/8864
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(212) 869-9741/8864
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100.0%; Pred. No. 16
Live 0; Mismatches
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100.0%; Pred. No.
tive 0; Mismatc
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US-08-701-191A-25
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TELEX: 67-3510
INFORMATION FOR SEQ ID NO: 25:
SEQUENCE CHARACTERISTICS:
LENGTH: 317 amino
                                                                                                                         Sequence 6, Application US/08836567 Patent No. 6130367
                                                                                                                                                                                                                                                                                                 Query Match
Best Local 9
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APPLICANT:
APPLICANT:
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APPLICATION UNBER: US/08/701.1012
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MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
              TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (213) 489-1600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: August: CLASSIFICATION: 530 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: 11
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STREET: 633 West Fifth Street
STREET: Suite 4700
                                                                                                                                                                                                                   93 GVCVQD 98
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REGISTRATION NUMBER: 32,327
REFERENCE/DOCKET NUMBER: 22
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STATE: California
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                                                          Springer, Franziska
Abel, Gernot
                                                                                           Kossmann, Jens
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DN: 530
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100.0%; Pred. No
Live 0; Mismat
PLANT CELLS AND PLANTS
                           DNA MOLECULES THAT CODE FOR ENZYMES INVOLVED IN STARCH SYNTHESIS VECTORS BACTERIA TRANSGENIC
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Mismatches
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              CONTAINING SAID MOLECULES
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Best Local Similarity
Matches 6; Conser
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/941,445A
FILING DATE: 30-SEP-1997
                                                                                                                                                                                                                                       APPLICANT: Keeling, Peter
APPLICANT: Guan, Hamping
TITLE OF INVENTION: Starch Encapsulation
NUMBER OF SEQUENCES: 37
CORRESPONDENCE ADDRESS:
                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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FILING DATE: 09-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P
FILING DATE: 10-NOV-1994
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS
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ZIP: 80303
                                                                                                                                                                                            CITY: Boulder
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                                                                                                                                                                              STATE:
                                                                                                                                                                                                            ADDRESSEE: Greenlee, Winner and Sullivan, STREET: 5370 Manhattan Circle
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Haley Jr., James REGISTRATION NUMBER: 2
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24-JUL-1997
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APPLICATION NUMBER: US 60/026,855 FILING DATE: 30-SEP-1996

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                              NFORMATION FOR SEQ ID NC: 8:
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                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/EP95/04415
FILING DATE: 09-NOV-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DE P 44 41 408.0
FILING DATE: 10-NOV-1994
SEQUENCE CHARACTERISTICS:
LENGTH: 767 amino acids
                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 212-596-9000
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                                                                                                                                            ATTORNEY/AGENT INFORMATION:
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TELECOMMUNICATION INFORMATION:
                                                                                           NAME: Haley Jr., James F.
REGISTRATION NUMBER: 27,794
REFERENCE/DOCKET NUMBER: Agrevo-4
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ITLE OF INVENTION:
ITLE OF INVENTION:
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OPERATING SYSTEM: PC-DOS/MS-DOS
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Abel, Gernot
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LIVOLVED IN STARCH SYNTHESIS VECTORS BACTERIA TRANSGENIC PLANT CELLS AND PLANTS CONTAINING SAID MOLECULES
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Best Local Similarity 75...
6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: protein US-08-836-567-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence 4, Application US/08445640 Patent No. 5709858
                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/170
FILING DATE: 20-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/157
FILING DATE: 23-NOV-1993
ATTORNEY/AGENT INFORMATION:
NAME: Hasak, Janet E.
REGISTRATION NUMBER: 28,61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 913 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 94000
COMPUTER READABLE FORM:
MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC -DOS/MS-DOS
689 GVCVQD 694
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: patin (Genentech)
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 85
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Genentech,
                                                                                                                                                                                                      TELEFAX: 410/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FITLE OF INVENTION: Protein Tyrosine Kinases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 399 GGVCYGDG 406
                                                                                                                                                                                                                                      TELEPHONE:
                          2 GVCVQD 7
                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 22-MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
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                                                                                                                                                                                                                          415/952-9881
                                                   Conservative
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                                                                                                                                        Linear
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Baron, Will F
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                                                                                                                                                                                                                                        415/225-1896
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                                                              73.9%; Score 34; DB 1; L 100.0%; Pred. No. 2.9e+02;
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75.08;
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                                                                                                                                                                                                                                                                              28,616
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Pred. No. 2.4e+02;
0; Mismatches 2
                                                                           Length 913;
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RESULT

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Search completed: June 13, 2001, 14:16:35 Job time: 496 sec
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                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk

MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PALIA (Genentech)

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/170,558

FILING DATE: 20-DEC-1993

CLASSIFICATION UNDER: 08/157563

FILING DATE: 23-NOV-1993

ATTORNEY/AGENT INFORMATION:

NAME: Hasak, Janet E.

REGISTRATION NUMBER: 28,616

REFERENCE/DOCKET NUMBER: 854C1

TELECHONE: 415/252-1896

TELECHONE: 415/252-1896

TELECAN: 415/952-9881

TELEX: 910/371-7168

INFORMATION FOR SEO ID NO: 4:

SEQUENCE CHARACTERISTICS:
LENCTH: 913 amino acids

TYPE: amino acids

TYPE: amino acids
                                                                                                                                                                           Query Match 73.9
Best Local Similarity 100.
Matches 6; Conservative
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Patent No. 6001621
GENERAL INFORMATION:
APPLICANT: Godowski, Paul J.
APPLICANT: Mark, Melanie R.
                                                                                                   2 GVCVQD 7
||||||
689 GVCVQD 694
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ADDRESSEE: Genentech, Inc.
STREET: 460 Point San Bruno Blvd
CITY: South San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Protein Tyrosine Kinases NUMBER OF SEQUENCES: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   94080
R RF
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Mark, Melanie R.
Scadden, David T.
Baker, Kevin P.
Baron, Will F.
                                                                                                                                                                               73.9%; Score 34; DB 3;
100.0%; Pred. No. 2.9e+0
tive 0; Mismatches
                                                                                                                                                                                                                   Length 913;
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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Gapop 10.0 ,
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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38	39	39	39	39	42	42	42	42	42	42	Score	
90.5	92.9	92.9	92.9	92.9	100.0	100.0	100.0	100.0	100.0	100.0	Match	Query
118	124	118	98	8	25	25	20	20	8	8	Match Length DB	
16	19	16	21	21	15	15	21	20	21	21	BB	
R66314	W80816	R66331	B40074	Y79123	R52793	R52775	Y79133	W94489	Y79119	Y84661	ID	
' Human 1mmunoglobul	Amino acid sequenc	Human immunoglobul	Anti-hIL12 antibod	Peptide antagonist	Murine BrE-3 immun	Murine BrE-3 immun	Human foetal intes	Human foetal intes	Peptide antagonist	Peptide antagnonis	Description	

45	44	43	42	41	40	39	38	37	36	<b>3</b> 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12
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5' EST	5 E	Human 5' EST relat	HSV-neutralising a	H-chain variable r	EGF receptor chime	heav	Human group III he	Anti-RSV F glycopr	adul	$\overline{}$	Human IgG heavy ch	N-terminal of C179	vy chain f	Peptide from human	from		Peptide antagonist	Llama antibody fra	Gamma anti-carcino	Biosynthetic antib	FRs and CDRs from		Anti-hCG anti-RR6	Protein encoded by		3		ide antaç	-reactive	rece	Antibody 15D3 heav	D3 VH	3 an

## ALIGNMENTS

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RESULT
Y84661
                           Y84661;
                                                  Y84661 standard; Protein; 8
25-JUL-2000 (first entry)
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Peptide antagnonist F2I/O of zonula occludens toxin (zot) polypeptide

Human; Zot; zonula occludens toxin; zonulin; antigen presenting cell; APC; lymphocyte proliferation; antigen; auto-immune disorder; immune system rejection; multiple sclerosis; organ transplantation; inflammatory disease; allergic disease; rheumatoid arthritis; insulin dependent diabetes mellitus; celiac disease; Sjogren's syndrome; systemic lupus erythematosus; celiac disease; Sjogren's syndrome; systemic lupus erythematosus; auto-immune thyroiditis; idiopathic thrombocytopenic purpura; hemolytic anemia; Grave's disease; Addison disease; autoimmune orchitis; pernicious anemia; vasculitis; autoimmune coagulopathy; polymyositis; myasthenia gravis; polyneuritis; autoimmune coagulopathy; polymyositis; Dermatomyositis; soleroderma; asthma; psoriasis; eczematous dermatitis; Rarposi's sarcoma; inflammatory bowel disease; proliferative disorder; 14-SEP-1998; 09-SEP-1999; 23-MAR-2000 Synthetic. WO200015252-A1 PCR primer; SS. 98US-0100266 99WO-US18842

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RESULT
Y79119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 8
                                                                                                                                                            blood-brain barrier; antiinflammatory; cerebroprotective;
neuroprotective; dermarological; antiulcer; antiviral;
antibacterial; cytostamic; anti-HIV; vulnerary; antiallergic;
17-FEB-2000
                                          WO200007609-A1
                                                                                                                            gastrointestinal
                                                                                                                                                                                                               blood-brain barrier;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              anemia, vasculitis, autoimmune coagulopathies, myasthenia gravis, polyneuritis, pemphigus, rheumatic carditis, polymyositis, bermatomyositis, and scleroderma. The inflammatory or allergic disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The method can be used to down-regulate APC-mediated lymphocyte proliferation in mammalian hosts suffering from auto-immune or immune-related disorders, immune system rejection subsequent to tissue or organ transplantation, or inflammatory or allergic diseases. The auto-immune or immune related disorders include multiple sclerosis, rheumatoid arthritis, insulin dependent diabetes mellitus, celiac disease, Sjogren's syndrome, systemic lupus erythematosus, auto-immune thyroiditis, idiopathic thrombocytopenic purpura, hemolytic anemia, orange's disease, Addison disease, autoimmune orchitis, pernicious
                                                                                                                        hypotensive; immunosuppressive; antiparasitic; gastrointestinal inflanmation; therapy.
                                                                                                                                                                                                                                       Zonulin;
                                                                                                                                                                                                                                                                           Peptide antagonist of conulin.
                                                                                                                                                                                                                                                                                                                      05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                    Y79119;
                                                                                                                                                                                                                                                                                                                                                                                                          Y79119 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or disorder is selected from asthma, psoriasis, eczematous dermati Karposi's sarcoma, multiple sclerosis, inflammatory bowel disease, proliferative disorders of smooth muscle cells, and inflammatory conditions associated with mycotic, viral, parasitic, or bacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The method comprises administering to the host an effective amount of a Zot-related immunoregulator selected from Zot (zonula occludens toxin) (zonulin, the amount effective to down-regulate the activity of the APC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents a peptide antagonist of zonula occlude toxin (zot) polypeptide. The specification describes a method of suppressing antigen presenting cell (APC)-mediated lymphocyte proliferation in a mammalian host pre-exposed to a particular antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 7; Page 59; 95pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Suppression of antigen presenting cell mediated lymphocyte proliferation, by administering a Zot-related immunoregulator useful for treating immune-related disorders, immune system rejection subsequent to tissue or organ transplantation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYMA-) UNIV MARYLAND BALTIMORE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
8; Conserv
                                                                                                                                                                                                                                     antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                          Peptide; 8 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%;
                                                                                                                                                                                                                          zonula occludens toxin receptor; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 42; DB 21;
Pred. No. 3.2e+05;
Mismatches 0;
                                                                                                                      therapy.
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                                                                                                                                          vasotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 8;
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Key

Location/Qualifier

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CC (TJ). The peptide antagonists are based on a common motif of ZOT CC and human zonulins, which is believed to be critical for receptor CC binding. They can be prepared by chemical synthesis or by use of CC recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal CC inflammation, where they bind to the ZOT receptor in the intestine CC and yet does not physiologically modulate the opening of TJ in the CC intestine. Gastrointestinal inflammation conditions give rise to concreased intestinal permeability and the peptide is useful for CC treating intestinal conditions that cause protein losing enteropathy CC caused by infection, e.g. Clostridium difficile infection, caused by infection, e.g. congenital gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with CC mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, CC collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglectasia, CC correction of congenital heart disease with Fontan's operation, CC mucosal diseases without ulceration, e.g. meneritar's disease.
                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                             Homo sapiens
                                                            Zonulin; mamma____.
vibrio cholerae; vaccine;
                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mucosal diseases without ulceration, e.g. Menetrier's disease, coellac disease, eosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                         21-APR-1999
                                                                                                                                                                                                             W94489
                                                                                                                                                                                                                                           W94489 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       corresponding to residues 8-15 of human foetal intestinal z
It is one of 25 peptide antagonists (see Y79105-29) of the
that bind to a zonula occludens toxin (ZOT) receptor, yet d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          that bind to a zonula occludens toxin (ZOT) receptor, ye physiologically modulate the opening of mammalian tight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This present sequence is that of a peptide antagonist of zonulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 45; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UYMA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                      1 GGVLVQPG 8
                                                                                                                                                                                                                                                                                 w
                                                                                                                                                                                                                                                                                                                                 ggvlvqpg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-205565/18
                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                             mammalian tight junction; zonula occludens holerae; vaccine; cholera toxin; polyclonal
                                                                                                                                                                                                                                                                                                                                                                                                   nilarity 100.
Conservative
                                                                                                                                intestine zonulin N-terminal peptide.
                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MARYLAND BALTIMORE
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                                                            nasal mucosa; blood brain barrier
                                                                                                                                                                                                                                                                                                                                                                                                                       .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                        .0%;
                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                 Score 42; DB
Pred. No. 3.2
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 ; DB 21;
. 3.2e+05;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      allergies, primarily
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                             antibody;
                                                                                               toxin;
                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            do not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              zonulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             invention
                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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RESULT
Y79133
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     physiological modulators of mammalian tight junctions. They can be used corrections of intestinal and nasal mucosa and across tight junctions of intestinal and nasal mucosa and across tight junctions of intestinal and nasal mucosa and across tight junctions of the blood brain barrier. Zonulin can be used with agents such as drugs, ce.g. lidocaine, adenosine, dobutamine, dopamine, epinephrine, nalbuphine, correspinephrine, naloxone, ketorolac, midazolam, propofol, metacurine, ce mivacurium, succinyicholine, cytarabine, mitomycin doxorubicin, covincristine, vinbiastine, methicillin, mezlocillin, piperacillin, cc vincristine, vinbiastine, methicillin, mezlocillin, piperacillin, cc testosterone, nandrolene, menotropins, insulin, urofolitropin, ce testosterone and interferon-beta, interferon-gamma, interleukin-1 (IL-1), IL-2, IL-4, IL-8, polyvalent IgG, specific IgG, IgA, or IgM. CC the protecins can also be used for the production of antibodies which can be used to assay for zonulin in body tissue or fluids, or in affinity-concertian of zonulin. The present sequence represents an N-terminal concertion of antibodies which can be used to assay for zonulin in body tissue or fluids, or in affinity-concertian of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                  Matches
Homo sapiens
                                  gastrointestinal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                occludens toxin (20T) polyclonal antibody, and is capable of reopening mammallan tight junctions. Zonulin proteins function as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               molecular weight of 47 kD, as determined by SDS-PAGE, which is recognised by both anti-tau polyclonal antibody and by anti-zonula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New purified zonulin - which is capable of reversibly opening mammalian tight junctions, used for enhancing the delivery of agents across intestinal and nasal mucosa and blood brain barrier
                                                    Zonulin; antagonist; zonula occludens toxin receptor;
human; blood-brain barrier; antiinflammatory;
                                                                                                                                        05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 2; Page 45; 64pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-070123/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-MAY-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference
                                                                                                    Human foetal intestine zonulin N-terminal sequence.
                                                                                                                                                                           Y79133;
                                                                                                                                                                                                         Y79133 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYMA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-APR-1998;
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                                                                                                                                                                                                                                                                                          1 GGVLVQPG 8
|||||||
8 ggvlvqpg 15
                                                                                                                                                                                                                                                                                                                                                               l Similarity
8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zonulin
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                                                                                                                                                                                                                                                                                                                                                               100.0%;
llarity 100.0%;
Conservative (
                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MARYLAND BALTIMORE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16
                                  inflammation; therapy.
                                                                                                                                                                                                         Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "unspecified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     describes pure zonulin which has an apparent
                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                             Score 42; DB 20; Pred. No. 0.28; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                 Length 20;
                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                0;
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В
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Best Local S
Matches 8
                                    13-NOV-1992;
                                                                                                                        WO9411508-A.
                                                                                                                                                                        Immunoglobulin variable domain; primer; polymerase chain reaction; chimeric antibody; human milk fat globule; BrE-3 VL-chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to be involved in receptor binding. Peptide antagonists (see Y79105-29) based on this motif are useful as antiinflammatory agents for treatment of gastrointestinal inflammation, and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human intestinal zonulin. The N-terminal sequences of human adult and foetal zonulins (see Y79130-36) were compared with Vibrio cholerae zonula occludens toxin (ZOT) to identify a common motif thought
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 3; Fig 6; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema. gastritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Key
Misc-difference
                        28-SEP-1993;
                                                                                                  26-MAY-1994.
                                                                                                                                                  Mus musculus
                                                                                                                                                                                                              Murine BrE-3 immunoglobulin heavy chain variable domain N-terminus
                                                                                                                                                                                                                                       24-JAN-1995
                                                                                                                                                                                                                                                                R52775
                                                                                                                                                                                                                                                                                        R52775 standard; Protein; 25 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          barrier.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present sequence is that of the N-terminal region of foetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-205565/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fasano A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UYMA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-FEB-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200007609-A1
                                                                         15-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment of conditions associated with breakdown of the blood-brain
                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                8 ggvlvqpg
                                                                                                                                                                                                                                                                                                                                                                             1 GGVLVQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 42; ilarity 100.0%; Pred. No. Conservative 0; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MARYLAND BALTIMORE
                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                     15
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                       92US-0977706.
92US-0977707.
93US-0128015.
                                                                         93WO-US11316
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "unidentified residue"
                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                0.28;
                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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(CANC-) CANCER RES FUND CONTRA COSTA.

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RESULT
R52793
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                 16-NOV-1992;
30-SEP-1993;
08-OCT-1993;
Primers JO2, JO3, JO4, JO14 and VH1BACK (Q62765-Q62769) were all used to prepare cDNAs that encode the BrE-3 mouse Ig variable domains. The amplified '7-regions lacked constant regions so as to produce less immunogenia polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions.
                                                                                                                       New analogue peptide(s) comprising antibody variable regions used to develop prods. For use in the detection, diagnosis, therapy and prevention of neoplasms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          used to prepare cDNAs that encode the BrE-3 mouse Ig variable domains. The amplified V-regions lacked constant regions so as to produce less immuogenic polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions. The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The manno acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. 85274 and R5275). The general agreement between the predicted and the determined amino acid sequences that the cloned cDNAs encode BrE-3.
                                                                                           Example 12; Page 53; 54pp; English.
                                                                                                                                                                                      WPI; 1994-183510/22
                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI;
                                                                                                                                                                                                                   (CANC-) CANCER RES FUND CONTRA COSTA.
                                                                                                                                                                                                                                                                                                                                                                       WO9411509-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                   chimeric antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R52793;
                                                                                                                                                                                                                                                                                                                                          26-MAY-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R52793 standard; Protein; 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 11; Page 32; 54pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric human-murine polypeptide(s) specific for human mammary fat globule antigen - for imaging, diagnosing and treating
                                                                                                                                                                                                                                                                                                           16-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                               Immunoglobulin variable domain; primer; polymerase chain reaction;
chimeric antibody; human milk fat globule; BrE-3 VL-chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Primers JO2, JO3, JO4, JO14 and VH1BACK (Q62740-Q62744) were all
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neoplasia, with less undesirable immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGVLVQPG 8
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|ggvlvqpg 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1994-183509/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BrE-3 immunoglobulin heavy chain variable domain N-terminus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                               92US-0977696.
93US-0123930.
93US-0134346.
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99
99
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 42;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 25;
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                       This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
treating intestinal conditions that cause prote caused by infection, e.g. Clostridium difficile
                                                                                                                                                                                                                                                                         Claim 1; Page 47; 69pp; English.
                                                                                                                                                                                                                                                                                                       New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigeliosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypotensive; immunosuppressive; antiparasitic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-205565/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Y79123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Y79123 standard; Peptide; 8 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The amino acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. R52792 and R52793). The general agreement between the predicted and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide antagonist of zonulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zonulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       determined amino acid sequences that the cloned cDNAs encode \mathtt{BrE-3}.
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nes 8; Conser
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ain barrier;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        therapy.
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                protein losing enteropathy
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RESULT
B40074
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Best Local
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This invention relates to a new human antibody specific for human interleukin-12 (IL-12). The invention also includes antigen binding portions that bind to IL-12. Sequences B39485-B39516 represent human anti-IL-12 antibody heavy and light chain complementarity determining region (CDR) amino acid sequences, and also includes variable region amino acid sequences. Other variable region amino acid sequences of the variable region amino acid sequences of the variable region amino acid sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complementarity determining region; CDR; antirheumatic; antias antisclerotic; neuroprotective; antipsoriatic; antiasthmatic; antiparasitic; antibacterial; immunosuppressive; Crohn's disea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, disea
                                                                                                                                                                                                                                                                                                                                 Derbyshire
                                                                                                                                                                                                                                                                                                                                                  Kaymakcalan Z, Labkovsky B,
Veldman GM, Venturini A, W
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          multiple sclerosis;
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                                                                                                                                                                    Claim
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                                                                                                                                                                                                                                                  New human antibody specific
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                                                                                                                                                                 75; Page 121; 377pp; English
                                                                                                                                                                                                                             disorders
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7; Conserv
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GENETICS INST INC
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                                                                                                                                                                                                                                                                                                                                                                                           Paskind M,
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                                                                                                                                                                                                                                                                                                                                   Smith
                                                                                                                                                                                                                                                                                                                                                     Warne
                                                                                                                                                                                                                   for human interleukin-12 (IL-12) used to be aberrant IL-12 expression e.g. Crohn's aig -
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Pred.
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    Sakorafas P, Friedrich S, M
    xrne NW, Widom A, Elvin JG,
    ith S, Holtet TL, Du Fou SL;
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No. 3.2e+05;
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Duncan AR;
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Best Local
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Protein sequences (R66295-51) are novel human immunoglobulin heavy chain sequences encoded by novel isolated genes. The genes (Q78939-79002) were isolated and cloned from a series of cosmid constructs: Y202; Y103; Y21; Y6;Y24; 3-31; M84; M118 and M131, by PCR amplification using primers Q78917-38. The genes are subdivided into 5 families of Vh genes. The fragments cover a region of 800 kb. The DNA fragments were isolated from high molecular weight DNA from human placenta. The DNA was partially digested with TaqI restriction enzyme. The fragments were separated by gel elecrophoresis and 35-45 kb fractions were collected. The fragments were ligated with ClaI-digested cosmid vector pJB81. The ligation products were in vitro packed and infected into E.coli 490A. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and has antirheumatic; antiarthritic; antisclerotic; antiinflammatory; neuroprotective; antipsoriatic; antiasthmatic; cardiant; antiparasitic; antibacterial and immunosuppressive districtivity. The antibodies or antipen-binding fragments are useful in the treatment of disorders associated with detrimental release of human IL-12, especially Crohn's disease, multiple sclerosis and rheumatoid arthritis. They can also be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  represent anti-IL-12 CDR3 related amino acid sequences, B39772-B40063 represent other CDR sequences. Light chain CDR3 consensus sequences are given in B40064-B40067. Primers used in the identification and construction of the antibodies of the invention are given in C61062-C61071. The antibody of the invention is a neutralising antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Primer; cosmid;
                                                                                                                                                                                                   Claim 50;
                                                                                                                                                                                                                                                DNA fragment
                                                                                                                                                                                                                                                                                                                                                    (NISB ) JAPAN TOBACCO INC
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placenta;
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                                                                                                                                                                                                                                                                                                                        Matsuda
                                                                                                                                                                                                 Page 85-87;
                                                                                                                                                                                                                                 of human
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enta; vector;
                                                                                                                                                                                                                               comprising human immunoglobulin Vh f human immunoglobulin in mammalian
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tor; pJB81; E.coli; mamm
                                                                                                                                                                                                 130pp; Japanese.
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Pred. No. 4.9;
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Best Local
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                                                                                                                                  This is the amino acid sequence of the human D7.2 heavy chain variable region, used in the method of the invention. for providing receptors that can be used for targeting antigens in humans without being immunogenic themselves. Such receptors can be used for treating diseases such as tumours or auto-immune diseases, graft rejection after transplantation; infectious diseases by targeting cellular receptors as well as allergic, inflammatory, endocrine and degenerative diseases by targeting key molecules involved in the
                                                                                                   Sequence
                                                                                                                                                                                                                                      Claim 9; Fig 8; 84pp; English.
                                                                                                                                                                                                                                                                       Production of anti-human antigen receptors - by combination of functionally rearranged VH and VL
                                                                                                                                                                                                                                                                                                         WPI; 1998-594564/50
N-PSDB; V68538.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; D7.2 heavy chain variable region; receptor; antigen; tumour; auto-immune disease; graft rejection; allergy; inflammatory disease; endocrine disease; degenerative disease.
                                                                                                                        pathological process.
                                                                                                                                                                                                                                                            chains expressed from a recombinant vector
                                                                                                                                                                                                                                                                                                                                          Kufer P,
                                                                                                                                                                                                                                                                                                                                                                                                14-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                            22-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
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1 GGVLVQPG 8
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8 ggvvvqpg 15
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ggvvvqpg 34
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                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-EP02180
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RESULT 11
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Best Local Similarity
Matches 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequences encoded by novel isolated genes. The genes (Q78939-79002) were isolated and cloned from a series of cosmid constructs: Y202; Y103; Y21; Y6;Y24; 3-31; M84; M118 and M131, by PCR amplification using primers Q78917-38. The genes are subdivided into 5 families of Vh genes. The fragments cover a region of 800 kb. The DNA fragments were isolated from high molecular weight DNA from human placenta. The DNA was partially digested with Tag1 restriction enzyme. The fragments were separated by gel elecrophoresis and 35-45 kb fractions were collected. The fragments were invitro packed and infected into E.coli 490A. The fragments were then subcloned by colony hybridisation. The Vh genes and the DNA fragments encoding them are useful in producing human
                                                      19-NOV-1998
                                                                                                                                                                  W69322 standard; Protein; 119 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA fragment comprising human immunoglobulin Vh production of human immunoglobulin in mammalian
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N-PSDB; Q78960.
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                                                      (first entry)
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Pred. No. 8.
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15D3 antibody heavy chain

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Matches 7
                                                                                                                             This sequence represents the VH chain of the antibody produced by hybridoma cell line 15D3. It is part of the nucleic acid of the invention which encodes a single-chain antibody molecule (scFv) comprising the heavy-chain complementarity-determining regions (CDRs) of the monoclonal antibody produced by hybridoma cell line 15D3, where the monoclonal antibody and scFv are capable of binding to multidrug-resistant (MDR) human tumour cells. The CDR sequences from both the heavy and light chains (HCDR1, HCDR2, HCDR3, LCDR1, LCDR2, and LCDR3) are all used in an expression cassette that can be used in a method for inducing the production of a polypeptide. The method is useful for producing recombinant scFv, which can be used for diagnosis or therapy (e.g. in the form of an immunotoxin) for MDR tumours.
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29-OCT-1990;
22-OCT-1993;
17-OCT-1994;
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                                                                                                                                                                                                                                                                                        Disclosure; Fig 1; 26pp; English
                                                                                                                                                                                                                                                                                                                DNA encoding single-chain antibody molecule - specific for multidrug-resistant tumour cells, useful in diagnosis or therapy
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N-PSDB; V44997.
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ggvlvrpg
                       GGVLVQPG 8
                                               Similarity 7; Conserv
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90US-0605399.
93US-0141375.
94US-0323566.
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                                                          90.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "HFR4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "HFR3"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "HCDR3"
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                                                          Score 38;
Pred. No.
                                               Mismatches
                                                                      DB 19; Length 119;
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RESULT Y32832

13

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1 GGVLVQPG 8 ggvlvrpg

Matches Query Match Best Local

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Similarity
7; Conserv

Conservative

90.5%;

Score Pred. 38;

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Length 119; Indels

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This sequence is the antibody 15D3 VH chain. The invention relates CC to isolated nucleic acid molecules comprising complementarity determining CC regions (CDRs) and framework regions (FRs) from humans and mice encoding CC amonomeric polypeptide that exhibits the immunological binding CC displaying the multiple drug resistance (MDR) phenotype. The recombinant CC nucleotide sequences can be used to transfect mammalian cells for the CC expression of recombinant human antibodies which exhibit the antigen CC specificity of the murine antibody molecule. The polypeptides produced CC can be used in specific binding assays, affinity purification schemes, drug or toxin targetting, imaging and genetic or immunological consists of that target human cancer cells expressing the MDR phenotype for gene therapy. The recombinantly venecred murine antigen binding sites consist of the selective replacement of FR residues from a rodent light or heavy chain V region with human FR residues to provide a xenogeneic molecule comprising an antigen binding site which retains substantially CC all of the native FR polypeptide folding structure. The nucleic acids cencode molecules with altered or enhanced antigen-binding capabilities and/or reduced immunogenicity.
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29-OCT-1990;
22-OCT-1993;
17-OCT-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Fig 1; 27pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic acids encoding antibody binding sites of immunoglobulins with affinity for cancer antigens useful in cancer therapy
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N-PSDB; Z10957.
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Sequence
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90US-0605399.
93US-0141375.
94US-0323566.
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W73503
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Matches 7
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22-OCT-1993;
17-OCT-1994;
 Key
                                                                                                                                                                                                                                                                                                                                                                                 This sequence represents the heavy chain of the antibody produced by the hybridoma 15D3. The protein is an example of a monomeric polypeptide of the invention that binds to a human tumour cell displaying multiple drug resistance. The polypeptides are used in specific binding assays, affinity purification, drug or toxin targeting, imaging or immunotherapy of various cancers.
                                                                                                                                                        W00240;
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                                                Mouse-human chimeric antibody; monoclonal antibody; chMint5; epidermal growth factor receptor; EGF-R; diagnosis; therapy; immunotoxin; immunocytokine; tumour; cancer.
                                                                                                     EGF receptor chimeric MAb chMint5 VH chain.
                                                                                                                              22-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Monomeric and dimeric poly:peptide(s) - which bind to human tumour cell displaying multiple drug resistance
                         Mus musculus.
                                                                                                                                                                              W00240 standard; Protein; 120
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N-PSDB; V08933.
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93US-0141375.
94US-0323566.
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Location/Qualifiers
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                                                                                                                                                                                        The amino acid sequence (W00240) of the heavy chain variable region (VY) of the epidermal growth factor receptor (EGF-R)-specific mouse-human chimeric antibody chmints was deduced from a cDNA clone (T33445) obtd. by PCR amplification of murine Mint5 hybridoma DSM ACC2150 cDNA. chMint5 comprises Mint5 VH and VL regions fused to human C-gammal and CK regions. Constructs were expressed in CHO cell transfectants. chMint5 shows lower immunogenicity than Mint5 when administered to humans. It can be used in diagnostic assays or used to produce immunotoxins or immunocytokines useful
                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Region
                                                                                                                                                                                                                                                                                                                                                  Claim 7; Page 15; 28pp; English.
                                                                                                                                                                                                                                                                                                                                                                                   Murine/human chimeric monoclonal antibody, chMint5 specific for EGF-R - shows a lower immunogenicity when administered to humans
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                                                                                                                                                                                                                                                                                                                                                                                                                       Ig heavy chain V-D-J region - human (Species: Homo sapiens (man) (C;Species: Homo sapiens (man) (C;Species: Homo sapiens (man) (C;Date: 13.Jan-1995 #sequence_revision 13-Jan-1995 #text_change 23-Jul-1999 (C;Accession: S44111 (R;Hawkins, R.E.; Zhu, D.; Ovecka, M.; Winter, G.; Hamblin, T.J.; Stevenson, F.K. submitted to the EMBL Data Library, March 1994 A;Description: Idiotypic vaccination against human B-cell lymphoma :rescue of vala, Reference number: S44105 A;Accession: S44111
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C;Species: Homo sapiens (man)
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C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
C;Accession: S26929
R;Tomlinson, I.M.; Walter, G.; Marks, J.D.; Llewelyn, M.B.; Winter, G.
J. Mol. Biol. 227, 776-798, 1992
A;Title: The repertoire of human germline V(H) sequences reveals about fift;
A;Reference number: S26885; MUID:93021117
                                                                                                                                                                       A;Molecule type: DNA
A;Residues: 1-120 <HAND
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A;Cross-references: EMBL:Z31387; NID:g472965; PIDN:CAA83262.1; PID:g940522
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>
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A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-98 <TOM>
A;Cross-references: EMBL:Z12335; NID:g32889; PIDN:CAA78205.1; PID:g32890
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>
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A;Cross-references: GDB:128528; OMIM:147070
A;Map position: 14932.33-14032.33
C;Superfamily: immunoglobulin V region; immu
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A:Title: Variable region sequences of five human immunoglobulin heavy chains of the V-HIA; Reference number: A93794; MUID:74142702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig heavy chain V-III region (Zap) - human (tentative sequence) C;Species: Homo sapiens (man) C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change
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Best Local Similarity
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C; Commept: This chain was isolated from
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R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: protein A; Residues: 1-116 < CAP>
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A; Residues: 1-427 <STO>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nature 406, 959-964, 2000
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C;Species: Pseudomonas aerucinosa
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|Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
|Accession: D83347
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   (fragment)
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                                                       A; ACCESSANCE PRE-LIMINARY
A; Status: pre-Liminary
A; Molecule type: DNA
A; Residues: 1 - 251 < MHI>
A; Cross-references: GB: AE002054;
AE002054;
AE0020554;
AE00205554;
AE0020554;
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A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A;Reference number: A75250; MUID:20036896
A;Accession: H73301
                        C; Genetics:
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hypothetical protein - Deinococcus radiodurans (strain R1)
c;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 31-Mar-2000
C;Accession: H75301
                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:218824; NID:g33111; PIDN:CAA79276.1; PID:g939891
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
F;15-98/Domain: immunoglobulin homology <IMM>
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C;Date: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change 21-Jan-2000
C;Accession: S54854
R;Tomlinson, M.; Walter, G.; Cook, X.Y.Z.; Winter, G.
submitted to the EMBL Data Library, November 1992
A;Reference number: S54854
A;Accession: S54854
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-96 <TOM>
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GB:AE000513; NID:g6460010; PIDN:AAF11766.1;

PID: 9646

A; Map position:

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A:Cross-references: GB:X55778; NID:g47818; PIDN:CAA39298.1; PID:g47819 R:Wingfield, P.; Graber, P.; Turcatti, G.; Movva, N.R.; Pelletier, M.; Eur. J. Biochem. 180, 23-32, 1989 A;Title: Purification and characterization of a methionine-specific am: A;Reference number: S03562; MUID:89210857 A;Accession: S03562
                                                                                                                                                                                                                                                                                                                                                             C:Accession: S12027; 503562

R:Movva, N.R.; Semon, D.; Meyer, C.; Kawashima, E.; Wingfield, P.; Miller, J.L.; Miller, Mol. Gen. Genet. 223, 345-348, 1990

A:Title: Cloning and nucleotide sequence of the Salmonella typhimurium pepM gene.

A:Reference number: S12027; MUID:91066851

A:Accession: S12027
                     C:Superfamily: Escherichia coli methionyl aminopeptidase C:Keywords: alpha-aminoacylpeptide hydrolase
                                                                                  A; Note: part of this sequence, C; Genetics:
                                                                                                                        A; Molecule type: DNA
A; Residues: 2-264 <W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   methionyl aminopeptidase (EC 3.4.11.18) - Salmonella typhimurium
N;Alternate names: peptidase M
C;Species: Salmonella typhimurium
C;Species: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 22-Jun-1999
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C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 21-Jan-2000
C;Accession: T35032
                                                                                                                                                              A; Status: nucleic
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A; Residues: 1-264 <MOV>
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A; Residues: 1-263 <SEE>
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A; Accession: T35032
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Samily: Mycobacterium hypothetical protein Rv0911
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7; Conser
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                                                                                                                        <WIN>
                                                                                                                                                              acid sequence not shown
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100.0%; Pr
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75.0%;
                                                                                                including the amino end of the mature protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 36; DB; Pred. No. 11; 0; Mismatches
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Pred.
2; Mis
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                                                                                                                                                                                                                         of a methionine-specific aminopeptidase from
#status experimental <MAT>
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Ig heavy chain V region - mouse (fragment)
(;Species: Mus musculus (house mouse)
(;Date: 19-Mar-1997 #sequence_revision 24-Jul-1997 #text_change
C;Accession: S33402; S36385
R;Kettleborough, C.A.; Saldanha, J.; Ansell, K.H.; Bendig, M.M.
Eur. J. Immunol. 23, 206-211, 1993
                                                                                                                                        RESULT
S33402
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ig heavy chain V regions (3-24 and 5-14) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 31-Jul-1989 #sequence_revision 31-Jul-1989 #text_change 30-May-1997
C;Accession: D31485
R;Bedzyk, W.D.; Johnson, L.S.; Riordan, G.S.; Voss Jr., E.W.
J. Biol. Chem. 264, 1565-1569, 1999
A;Title: Comparison of variable region primary structures within an anti-flue; Reference number: A31485; MUID:89109167
A;Reference number: A31485; MUID:89109167
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: protein
A; Residues: 1-36 < RED:
C; Superfamily: immunoglobulin
C; Keywords: heterotetramer; im
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Best Local Similarity
watches 7; Conserv
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A;Residues: 1-32 <BED>
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ig heavy chain V region (10-25) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Datec: 1.Jul-1989 #sequence_revision 31-Jul-1989 #text_change 30-May-1997
C;Accession: F31485
C;Accession: F31485
R;Bedzyk, W.D.; Johnson, L.S.; Riordan, G.S.; Voss Jr., E.W.
J. Biol. Chem. 264, 1565-1569, 1989
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A; Accession: F31485
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A; Title: Optimization of primers A; Reference number: S33391; MUID
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Best Local S
Matches 6
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Best Local
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6; Conserv
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75.0%;
MUID:93122092
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immunoglobulin
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Pred.
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Pred. No.
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35;
                libraries of mouse
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              genes
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submitted to the EMBL Data Library, April 1993
A.Reference number: S36376
A.Reference number: S36381
A.Recession: S36381
A.Rocession: S36381
A.Rocession: S36381
A.Rocession: S36381
A.Residues: 1-59 <ANS>
A.Residues: 1-59 <ANS>
A.Cross-references: EMBL:X7:012; NID:g295879; PIDN:CAA51498.1; PID:g939941
A.Fattle: Optimization of primers for cloning libraries of mouse immunoglob.
A.Reference number: S33391; MUID:93122092
                                                                                                                                                                                                                                             Ig heavy chain V region - mouse (fragment)
c;Species: Mus musculus (house mouse)
C;Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 23-Jul-1999
C;Accession: S36381; S33396
R;Ansell, K.H.
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C; Date: 08-Ma
C; Accession:
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C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
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A;Residues: 1-59 <CUR>
A;Cross-references: GB:M19706
A;Note: the authors translated the codon TCC for residue 28 as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Currier, S.J.; Gallarda, J.L.; Knight, K.L.
J. Immunol. 140, 1651-1659, 1988
A;Title: Partial molecular genetic map of the rabbit V-H chromosomal region A;Reference number: A27606; MUID:88154464
A;Accession: A27606
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A; Reference number: S36376
A; Accession: S36385
A; Molecule type: mRNA
A; Residues: 1-30 < ANS-
A; Residues: 1-30 < ANS-
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A; Molecule type: mRNA
A; Residues: 1-38 </E7>
A; Cross-references: EMBL: X'3019
A; Experimental source: strain BALB/c
R; Ansell, K.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ig heavy chain V-a region (p26.9p2) - rabbit (fragments) (Species: Oryotolagus cuniculus (domestic rabbit) C;Date: 08-Mar-1989 #sequence_revision 30-Jun-1991 #text
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C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;1-38/Domain: immunoglobulin homology (fragment) <IMM>
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Best Local Similarity F/...
Thes 7; Conservative
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Best Local
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|| |||||
8 GGGLVQPG 15
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nes 7; Conser
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67.5%;
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Pred. No.
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                          mouse immunoglobulin genes us
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Search completed: June 13, 2001, 14:10:46 Job time: 147 sec

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Query Match
Best Local Similarity
"-+~hes 7; Conserv
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A;Residues: 1-33 </EFT>
A;Cross references: EMBL:X73011
A;Experimental source: strain BALB/c
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Keywords: heterotetramer; immunoglobulin
E;8-60/Domain: immunoglobulin homology (fragment) <IMM>
                                                                                                                                                                                                                                                                                                                  A; Molecule type: mRNA
A; Residues: 1-60 < ANS-
A; Cross-references: EMBL: X73011; NID: 9295878; PIDN: CAA51497.1; PID: 9939940
R; Kettleborough, C.A.; Saldanha, J.; Ansell, K.H.; Bendig, M.M.
Eur. J. Immunol. 23, 206-211, 1993
A; Title: Optimization of primers for cloning libraries of mouse immunoglobulin genes A; Reference number: S33391; MUID: 93122092
A; Accession: S33397
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A;Molecule type: mRNA
A;Residues: 3-43 <KET>
A;Cross-references: EMBL:X73012
A;Experimental source: strain BALB/c
C;Superfamily: immunoglobulin V region; immunoglobulin hc
C;Keywords: heterotetramer; immunoglobulin
F;14-59/Domain: immunoglobulin homology (fragment) <IMM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Mus musculus (house mouse)
C;Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 23-Jul-1999
C;Accession: S36382; S33397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Reference number: A; Accession: S36382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              submitted to the EMBL Data Library, April 1993 A; Reference number: S36376
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Best Local Similarity
Matches 7; Conserv
  1 GGGLVQPG
                                    1 GGVLVQPG 8
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PRINTS; PR00599; MAPEP!IDASE.
PROSTTE; PS00680; MAP_L; 1.
Hydrolase; Aminopeptidase; Cobalt.
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InterPro; IPR000994;
InterPro; IPR001714;
InterPro; IPR002467;
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MOVVA N.R., Semon D., Meyer C., Kawa
Miller J.L., Miller C.G.;
"Cloning and nucleoticle sequence of
gene.";
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P01796; P1796; Rel. 01, Created)
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15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION A4.
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InterPro; IPR003006; -.
Pfam; PF00047; ig; 1.
Immunoglobulin V region.
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                                                                                                                                                                                                                                                                                                                                                                                                                    proteins.";
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Vrana M., Rudikoff S., Potter M.;
"Sequence variation among heavy chains from inulin-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
NCBI_TaxID=10090;
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InterPro; IPR003006; -
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Proc. Natl. Acad. Sci. U.S.A. 77:3630-3634(1880).

-i- MISCELLANEOUS: THE SEQUENCE OF THE FIRST 197 RESIDUES OF THE CREGION WAS ALSO DETERMINED & DIFFERS IN ONLY 3 POSITIONS FROM THE CORRESPONDING PORTION OF THE MOUSE MOPC 104E MU CHAIN.
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Immunoglobulin V region.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                  myeloma
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RESULT 5 HV28\_MOUSE

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GGGLVQPG

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Matches 7
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Best Local S
Matches 7
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Pfam; PF00047; 1g; 1.
Immunoglobulin V region.
DISULFID 22 98 BY
NON_TER 113 113
SEQUENCE 113 AA; 12671 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ro
NCBI_TaxID=10090;
                                                                                                 PIR; C93818; AVMS09.
InterPro; IPR003006; -.
Pfam; PF00047; 1g; 1.
Immunoglobulin V region.
DISULFID 22 98
                                                                                                                                                                                                                                                                                                                          HV29_MOUSE
P01798;
                                                                                                                                                                                                                                                                                                                                               MOUSE
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p01797;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION U61.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Proc.
                                                                                                                                                           proteins.";
Proc. Natl. Acad. Sci. U.S.A.
-I- MISCELLANEOUS: THIS CHAIN
                                                                                                                                                                                        MEDLINE=78158406; PubMed=417344;
Vrana M., Rudikoff S., Potter M.;
"Sequence variation among heavy chains
                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                 21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG HEAVY CHAIN V-III REGION E109.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-78158406; PubMed-417344; Vrana M., Rudikoff S., Potter M.
                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                         Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BINDS INULIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Vrana M., Rudikoff S., Potter M. "Sequence variation among heavy
                                                                                                                                                                                                                                                                                                                                                                                       8
GGVLVQPG
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                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 87.17; Conservative
                                       Similarity
                                                                                                                                                     INULIN
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113
113 AA;
                                                                                                                                                                                                                                                                                                                                     STANDARD;
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12647
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THIS CHAIN WAS, ISOLATED FROM
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Rodentia;
                                     83.3%;
87.5%;
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87
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                            Pred. No. 3.6;
0; Mismatches
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Pred.
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                                                                                                                                                             75:1957-1961(1978)
WAS ISOLATED FROM
                                                                                                                                                                                                                                                                                                                                   PRT;
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ced. No. 3.6;
Mismatches
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RESULT 7
HV30_MOUSE
ID HV30SM
AC P01799
AC P01799
DT 21-JUL
DT 21-JUL
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Best Local (
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Immunoglobulin V region.
DISULFID 22 98
NON.TER 113 113
SEQUENCE 113 AA; 12675
DISULFID NON_TER SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                       P01800:
21-JUL-1986 (Rel. 01, Created)
01-OCT-1993 (Rel. 27, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION T957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON_TER
SEQUENCE
                                                                                                                                                              MEDLINE-81216632; PubMed-6787122;
Rudikoff S., Potter M.;
"Immunoglobulin heavy chains from anti-inulin myeloma "rimdence for a new heavy chain joining segment.";
J. Immunol. 127:191-194(1981).
-!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYEI
                                                                               PIR; A92810; AVMS57.
InterPro; IPR003006; -.
Pfam; PF00047; ig; 1.
                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; R
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Vrana M., Rudikoff S., Potter M.;
"Heavy-chain variable-region sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
                                      InterPro; ir..., 1g; 1.
Pfam; PF00047; ig; 1.
Immunoglobulin V region.
22 98
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[1]
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21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION ABE-47N.
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    AA;
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Rodentia;
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Rodentia;
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Sciurognathi; Muridae;
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  26618F626B59859E CRC64;
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                                        SIMILARITY
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3.6;
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Query Match

83.3%;

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Length 113;

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Matches
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21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, List sequence
15-JUL-1999 (Rel. 38, Last annotati
IG HEAVY CHAIN V-III REGION J606.
Mus musculus (Mouse).
                                                                                                                                                                                                                                                                                                                                                             Interpro; IPR003006; -.
Pfam; PF00047; 19; 1.
Immunoglobulin V region.
DISULFID 22 98 BY
NON_TER 113 113
SEQUENCE 113 AA; 12691 MW;
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PO1803;
21-JUL-1986 (Rel. 01, Cres
21-JUL-1986 (Rel. 01, Lass
15-JUL-1999 (Rel. 38, Lass
IG HEAVY CHAIN V REGICN AL
                                                                                        MEDLINE-82099361; PubMed-6798111;
Johnson N., Slankard J., Paul L.,
                                              PIR;
                                                                      J. Immunol. 128:302-307(1982)
                                                                                                                                       Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10090;
                            Pfam;
                                                                                                                        SEQUENCE.
                                                                                                                                                                                                                                                                                                                                                                                                                         PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                "Immunoglobulin heavy chains from anti-
evidence for a new heavy chain joining
J. Immunol. 127:191-194(1981).
                                    interPro;
                                                                                                                                                                                                                             HV32_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rudikoff S., Potter M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE-81216632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rcdentia; Sciurognathi; Muridae;
NCBL_TaxID=10090;
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                                            BINDS INULIN. ; C92811; AVMS06.
                                                             MISCELLANEOUS: THIS
    C92811; AVM50.
C92811; AVM50.
CPTO; IPRO03006; -...; PF00047; 1g; 1.
CPTO0047; 1g; 1.
CPTO0047; 1g; 1.
CPTO0047; 1g; 1.
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| GGGLVQPG 15
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                                                                                                                                                                                                                             STANDARD;
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01, Last sequence up
38, Last annotation
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                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                         83.3%;
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                                                              CHAIN
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       ВΥ
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Sciurognathi;
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0; Mismatches
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       SIMILARITY.
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sequences
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on update)
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thi; Muridae; Murinae; Mus
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                                                             MYELOMA
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HV3D_HUMAN
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P01765;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sec.
15-JUL-1999 (Rel. 38, Last and IG HEAVY CHAIN V-III REGION T:
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Interpro; IPR003006; ...
Pfam; PF00047; 1g; 1.
Immunoglobulin V region.
DISULFID 22 98
NON_TER 115 115
"Immunoglobulin structure and genetics. regions of a mu and a gamma2 chain.";
J. Biol. Chem. 252:7192-7199(1977)
-i- MISCELLANEOUS: THE SEQUENCES OF THE OF IGM AND IGG2 ISOLATED FROM A SING
                                            SEQUENCE.
MEDLINE=78005528; PubMed=409716; Wang A.-C., Wang I.Y., Fudenberg
                                                                                           Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
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HV33_MOUSE
P01802;
21-JUL-1986
                                                                                    NCBI_TaxID=9606;
                                                                                                                Homo sapiens (Human)
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NCBI_TaxID=10090;
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Eukaryota; Metazoa; C
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MEDLINE-82099361; PubMed-6798111; Johnson N., Slankard J., Paul L., The complete V domain amino acid
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7-TTT REGION W3082.
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REGION TIL.
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Pred. No. 3.6;
0; Mismatches
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Craniata; Vertebrata; Catarrhini; Hominidae;
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Euteleostomi; Homo
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HV3R_HUMAN STANDARD;
P01779;
21-JUL-1986 (Rel. 01, Created)
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SEQUENCE
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Immunoglobulin V region; Signal.
SIGNAL 1 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license are not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
MCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro: IPR003006; -. Pfam; PF00047; 1g; 1. Immunoglobulin V region. NON_TER 115 115 NA; 12356 MW;
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PIR; A02076; HVMS44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (See http://www.isb-sibor send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       germ-line VH gene segment.";
Nucleic Acids Res. 9:4099-4109(1981).
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MEDLINE-82059449; PubMed-6795591;
Ollo R., Auffray C., Sikorav J.-L., F
Mouse heavy chain variable regions:
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21-JUL-1986 (Rel.
15-JUL-1999 (Rel.
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P01806;
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-JUL-1986 (Rel. 01, Last sequence update)
-JUL-1999 (Rel. 38, Last annotation update)
HEAVY CHAIN V REGION 441 PRECURSOR.
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12911 MW; 684FF3EF9A95D9F3 CRC64;
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HV3T_HUMAN
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PIR; A02064; M3HUGL.
HSSP; P01772; 21G2.
InterPro; IPR003006; .
Pfam; PF00047; ig; l.
Immunoglobulin V region.
NON_TER 116 116
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15-JUL-1999 (Rel. 38, Last annotation update)
IG HEAVY CHAIN V-III REGION TUR.
HOMO Sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
[1]
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Proc. Natl. Acad. Sci. U.S.A. 71:845-848(1974).
-!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGAL MYELOMA
                                                                                                                                                                                                                                               Submitted (JUN-1975) to -!- MISCELLANEOUS: THIS
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21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION GAL.
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Mammalia; Eutheria; Primates;
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Kehoe J.M.;
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Search completed: June 13, 2001, 14:21:46
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O9v2h0 pyrococcus
O73907 gallus gall
O52169 pseudomonas
O0573 pseudomonas
O9jxz2 neisseria m
O9jvx8 neisseria m
O9jvx8 neisseria m
O9jvx8 nicrococcus
O9ngf2 drosophila
O9n6a6 drosophila
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09rsa9 deinococcus

09xa16 streptomyce

09qv16 rattus sp.

09ulb6 homo sapien

09ul91 homo sapien

09ul72 homo sapien

09ul72 homo sapien

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RESULT 2 Q9RSA9 ID Q9RSA9 AC Q9RSA9; DT 01-MAY- DT 01-MAY-	Query Match Best Local Matches 1 GGV   1   1   1   1   1   1   1   1   1   1	SEQUENCE F SEQUENCE F STRAIN=XM3 MEDINE=98 Kim K.S., "arfI and Cytophaga Appl. Envi- -!- CATALY -!- CATALY ARABIN EMBL; AFO2! Hydrolase; SEQUENCE	Cytopl Bacter	068278 068278; 01-AUG-1998 01-AUG-1998 01-NOV-1998 01-NOV-1998 ARFI (EC 3.2	SULT 1	44444000000000000000000000000000000000
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Science 286:1571-1577(1999).
EMBL; AE002054; AAF117:56.1; --
TIGR; DR2216; --
Hypothetical protein.
SEQUENCE 251 AA; 26788 MW;
                                                                                                                                       Submitted [3]
           Redenbach M., Kieser H.M., Denapaite D., Eichner A Kinashi H., Hopwood D.A.; Rinashi H., Hopwood D.A.; "A set of ordered cosmids and a detailed genetic a the 8 Mb Streptomyces coelicolor A3(2) chromosome. Mol. Microbiol. 21:77-95(1996).
EMBL; AL079335; CAB45583.1; -.
                                                                            STRAIN=As(4),
MEDLINE=97000351; PubMed=8843436;
Pedenbach M., Kieser H.M., Denapaite
                                                                                                             SEQUENCE FROM STRAIN-A3(2);
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Streptomyces coelicolor.

Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;

Bacteria; Streptomycineae; Streptomycetaceae; Streptomyces
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"A set of ordered cosmids and a detailed genetic and physical map the 8 Mb Streptomyces coelloolor A3(2) chromosome.";
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
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White O., Elsen J.A., Heidelberg J.F., Hickey E.K., Peterson J.D.,
White O., Elsen D.H., Gwinn M.L., Nelson W.C., Richardson D.L.,
Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L.,
Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M.,
Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M.,
Vamathevan J.J., Lam P., McDonald L., Utterback T., Zalewski C.,
Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D.
Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C.,
Eraser C.M.;
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Bacteria; Thermus/Deinococcus
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Q1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
IMUNOGLOBULIN HEAVY CHAIN (FRAGMENT).
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"Human VH gene sequence.";
Submitted (NOV-1999) to th
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Cohen H., Cohen O
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10527
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Score 35; DB
Pred. No. 15;
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Last annotation updat
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SEQUENCE
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SEQUENCE FROM N.A.
MEDLINE-98277139; PubMed-9614934;
"'''' B., Van der Merwe P.L.
                                                                                                                                                                                                           Clin. Immunol. Immunopathol. EMBL; AF035042; AAD56278.1; HSSP; P01772; 2FB4.
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MEDLINE-98277139; PubMed-9614934;
Mu X., Liu B., Van der Merwe P.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalla; Eutherla; Primates; Catarrhini; Hominidae;
NCBI_TaxID=9606;
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01-MAY-2000 (TIEMBLIEL 13, Last sequence update)
01-JUN-2000 (TIEMBLIEL 14, Last annotation update)
MYOSIN-REACTIVE IMMUNOGLOBULIN HEAVY CHAIN VARIABLE
HOMO Sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
MYOSIN-REACTIVE IMMUNOGLOBULIN HEAVY CHAIN VARIABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
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  Similarity 87.17; Conservative
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Score 35; DB Pred. No. 19; 0; Mismatches
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Pred. No. 19;
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Q9PJT5
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O9PJT5
O9PJT5;
C1-OCT-2000 (TrEMBLrel. 15, Cre
f 01-OCT-2000 (TrEMBLrel. 15, Lag
T 01-OCT-2000 (TrEMB
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O57998;
O1-AUG-1998 (TrEMBLrel. 07, Created)
O1-AUG-1998 (TrEMBLrel. 07, Last sequence update)
O1-OCT-2000 (TrEMBLrel. 15, Last annotation update)
O1-OCT-2010 (TrEMBLREL 15, Last annotation update)
O1-OCT-2010 (TrEMBLREL 15, Last annotation update)
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EMBL; AE002342; AAF39551.1; -.

TIGR: TC0742; -.
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MEDLINE-20150255; PubMed-10684935;
Read T.D., Brunham R.C., Shen C., Gill S.R., H
White O., Hickey E.K., Peterson J., Utterback
Linher K., Weidman J., Khouri H., Craven B., B
Gwinn M., Nelson W., DeBoy R., Kolonay J., McC
Eisen J., Fraser C.M.;
MEDLINE=98344137; PubMe
Kawarabayasi Y., Sawada
Yamamoto S., Sekine M.,
                                                                                                                              SEQUENCE FROM STRAIN=OT3;
                                                                                                                                                                                                                                                    Pyrococcus horikoshii.
Archaea; Euryarchaeota;
NCBI_TaxID=53953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hypothetical protein. SEQUENCE 238 AA; 2
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Bacteria; Chlamydiales;
NCBI_TaxID-83560;
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PubMed=9679194;
Sawada M., Horikawa
ne M., Baba S.-I., I
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M., Haikawa Y., Hir
Kosugi H., Hosoyama
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                                                                                                                                                                                                                                                                                                      Thermococcaceae;
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    Nagai Y.,
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Best Local S
Matches 6
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Best Local S
Matches 5
                                                                                             073907 PRELIMINARY;
073907;
01-AUG-1998 (TrEMBLrel. 0
01-AUG-1998 (TrEMBLrel. 0
01-MAY-2000 (TrEMBLrel. 1
CNKX-2.3 PROTEIN.
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01-MAY-2000
01-JUN-2000
                                                              Gallus gallus (Chicken).
Eukaryota; Metazoa; Chcr
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Funahashi T., Tanaka T., Kudhi Y., Yamazaki J., Kushida N.,
Aoki K. -I., Yoshizawa T., Nakamura Y., Robb F.T., Horikoshi
Masuchi Y., Shizuya H., Kikuchi H.;
"Complete sequence and gene organization of the genome of a
thermophilic archaebacterium, Pyrococcus horikoshii OT3.";
DNA Res. 5:55-76(1998)
EMBL; AP000001; BAA293:2.1;
                                                                                                                                                                                                                                                                                                                        "Pyrococcus abyssi gencme sequence: structure and evolution."; submitted (JUL-1999) to the EMBL/GenEMBL; AJ248283; CAB49028.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; AP000001; BAA29332.1; -.
INTERPRO; IPR001279; -.
PFAM; PF00753; Lactamasse_B; 1.
Hypothetical protein.
SEQUENCE 257 AA; 28680 MW;
                                                  Archosauria;
  TISSUE-HEART;
                                                                                                                                                                                                                                                                                                      Hypothetical protein. SEQUENCE 272 AA; 30372 MW;
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             SEQUENCE FROM
                               NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                               STRAIN-ORSAY;
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                                                                                                                                                                                                                                                                                                                                                                                                            Archaea; Euryarchaeota;
NCBI_TaxID=29292;
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6; Conservative
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5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TIEMBLIEL 13, Created)
(TIEMBLIEL 13, Last sequence update)
(TIEMBLIEL 14, Last annotation update)
L 30.4 KDA FROTEIN.
                                                     Aves;
                                                                                                                                                      PRELIMINARY;
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                                                     Neognathae;
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Pred. No.
                                                   Craniata; Vertebrata; Euteleostomi; Galliformes; Phasianidae; Phasiani
                                                                                                                                                      PRT;
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47;
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                                                     Phasianinae;
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RESULT Q06573 ID Q06 AC Q06

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Q06573 Q06573;

PRELIMINARY;

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Best Local S
Matches 6
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Best Local S
Matches 6
                                                                                                                                                                                                                                                                                        "Cloning and sequencing of the regulation gene of the phe degradative genes from Pseudomonas putida BH.";
L'Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
R'EMBL: D63814; BAA09883.1; -.
R'HSSP: P11028; 1FIP:
R'
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Q52169;
Q1-NOV-1996
Q1-NOV-1996
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PROSITE; PS00027; HOMEOBOX_2; 1
PROSITE; PS50071; HOMEOBOX_2; 1
HOMEOBOX; DNA-binding; Nuclear
SEQUENCE 323 AA; 36034 MW;
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Bacteria; Proteoba
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-!- SUBCELLULAR LOCATION: NU
EMBL; X97667; CAA66257.1; -.
HSSP; P23441; IFTT.
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Buchberger A., Pabst O., Brandt T., Seidl K., Arnold H.H.;
Buchberger A., Pabst O., Brandt T., Seidl K., Arnold H.H.;
"Chick NKX-2.3 represents a novel family member of vertebrate
homologues to the Drosophila homeobox gene tinman: differential
expression of cNKX-2.3 and cNKX-2.5 during heart and gut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PHER PROTEIN.
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PROSITE; PS00675; SIGMA54_
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Tettelin H., Saunders N.J., Heidelberg J., Jeffries A.C., Eisen J.A., Ketchum K.A., Hood D.W., Peden J.F., Dodson R. Nelson W.C., Gwinn M.L., DeBoy R., Peterson J.D., Hickey Haft D.H., Salzberg S.L., White O., Fleischmann R.D., Doug Mason T., Ciecko A., Parksey D.S., Blair E., Cittone H., Cotton M.D., Utterback T.R., Khouri H., Qin H., Vamathevan
                                                                                                                                SEQUENCE FROM N.A.
STRAIN-MC58 / SEROGROUP B;
MEDLINE-20175755; PubMed-10710307;
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-i. FUNCTION: REGULATORY PROTEIN OF THE PHENOL CATABOLIC PATHWAY

-i. SIMILARITY: THE CENTRAL REGION CONTAINS A SIGMA-54 FACTOR

INTERACTION ATP-BINDING DOMAIN.

-i. SIMILARITY: BELONGS TO THE NTRC FAMILY OF TRANSCRIPTIONAL
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Plasmid pVI150.
Bacteria; Proteobacteria.
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Bacteria; Proteobacteria; beta sul
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SIGMA54_INTERACT_3; 1.
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SIGMA54_INTERACT_4; 1.
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Science 287:1809-1815(2000).
EMBL; AE002532; AAF42162.1;
TICR; NNB1827; -
TICR; NNB1827: 1144 AA; 127134 MW
                                                                                                                                                                                                                                                                                                                                                                                                                  Parkhill J., Achtman M., James K.D., Bentley S.D., Churcher Klee S.R., Morelli G., Basham D., Brown D., Chillingworth T. Davies R.M., Davis P., Devlin K., Feltwell T., Hamlin N., HC Jagels K., Leather S., Moule S., Mungall K., Quail M.A., Rajandream M.A., Rutherford K.M., Simmonds M., Skelton J., Whitehead S., Spratt B.G., Barrell B.G.; Scott Complete DNA sequence of a serogroup A strain of Neisseria menigitidis 22491.
                                                                                                                                                                                                                                                                                                                              Nature 404:502-506(2000).
EMBL; AL162753; CABB3921.1;
Transferase; Nucleotidyltran
SEQUENCE 1144 AA; 126975
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MEDLINE=20222556; PubMed=
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Bacteria; Proteobacteria; beta subdivision; Neisseriaceae;
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Minimum DB
Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
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     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seg length: 0 seg length: 2000000000
  Match
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1: /cgn2_6/ptcdata/2/laa/5A_COMB.pep:*

2: /cgn2_6/ptcdata/2/laa/5B_COMB.pep:*

3: /cgn2_6/ptcdata/2/laa/6A_COMB.pep:*

4: /cgn2_6/ptcdata/2/laa/6B_COMB.pep:*

5: /cgn2_6/ptcdata/2/laa/PCTUS_COMB.pep:*

5: /cgn2_6/ptcdata/2/laa/backfiles1.pep:*
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Copyright (c) 1993 - 2000 Comp
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           US-08-859-931A-4
US-08-545-809A-125
US-08-545-809A-126
US-08-483-199-16
US-08-483-199-16
US-08-428-197-38
PCT-US93-10555-38
US-08-331-398A-56
US-08-331-398A-55
US-08-331-398A-55
US-08-331-398A-55
US-08-331-398A-55
US-08-401-908-14
US-08-89-931A-2
US-08-89-931A-2
US-08-467-282B-80
US-08-471-282A-80
US-08-467-282B-81
US-08-467-282B-81
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US-08-467-282B-81
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4, Appli
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Matches 8; Conserv
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ALIGNMENTS	PCT-US93-10555-4	US-08-428-197-4	PCT-US93-10555-48	US-08-665-202-31	US-08-428-197-48	US-07-942-245-37	US-08-211-202-116	US-08-765-783A-105	US-08-497-312-21	US-08-053-451B-126	US-08-162-102C-36	US-08-470-139-17	US-08-765-783A-92	US-08-362-780-7	US-08-129-930B-75	US-07-977-696C-75	US-07-988-925-7	US-08-468-739C-119
	Sequence 4, Appli	➣	Sequence 48, Appl	Sequence 31, Appl	Sequence 48, Appl	Sequence 37, Appl	Sequence 116, App		Sequence 21, Appl	Sequence 126, App	Sequence 36, Appl	Sequence 17, Appl	Sequence 92, Appl	Sequence 7, Appli	Sequence 75, Appl	•	Sequence 7, Appli	Sequence 119, App

## ; MOLECULE TYPE: peptide ; HYPOTHETICAL: NO US-08-859-931A-4 RESULT 1 US-08-859-931A-4 Sequence 4, Application US/08859931A Patent No. 5945510 GENERAL INFORMATION: TELEPHONE: (202) 293-7060 TELEFAX: (202) 293-7860 INFORMATION FOR SEQ ID NO: 4: COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08 FILING DATE: 21 MAY 1997 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION: NAME: KIT, Gordon ENERAL INFORMATION: APPLICANT: FASANO, Alessio TITLE OF INVENTION: SUBSTAN TITLE OF INVENTION: PHYSIOI TITLE OF INVENTION: MAMMALI SEQUENCE CHARACTERISTICS: LENGTH: 20 amino acids TYPE: amino acid TOPOLOGY: linear REGISTRATION NUMBER: 30,764 REFERENCE/DOCKET NUMBER: A-6901 TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 293-7060 NUMBER OF SEQUENCES: 9 CORRESPONDENCE ADDRESS: STREET: 2100 Pennsylva CITY: Washington, D.C. STATE: D.C. COUNTRY: ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS STREET: 2100 Pennsylvania Avenue, N.W., Suite 800 20037 SUBSTANTIALLY PURE ZONULIN, PHYSIOLOGICAL MODULATOR OF MAMMALIAN TIGHT JUNCTIONS US/08/859,931A

GGVLVQPG 15

Conservative

100.0%; Score 42; DB 2; 100.0%; Pred. No. 0.095;

Mismatches

0

0

Gaps

0

Length 20; Indels

JS-08-545-809A-125

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US-08-545-809A-108
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Best Local Similarity
The 7; Conserv
                                                                                                                                                                                                            Sequence 108, Application JS/08545809A Patent No. 6096878
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Patent No.
                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                           tent No.
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ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Freeman, John 4,
REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 06:
TELECOMMUNICATION INFORMATION:
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APPLICANT: MATSUda, FUNITIKO
TITLE OF INVENTION: HUMAN IMMUNOGLOBULIN VH GENE
TITLE OF INVENTION: SEMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                               APPLICANT: Honjo, Tasuku
APPLICANT: Matsuda, Funihiko
TITLE OF INVENTION: HUMAN INV
TITLE OF INVENTION: SEGMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 2CT/
FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
                                                                 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Ri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
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ADDRESSEE: Fish & Richardson, P.C.
STREET: 225 Franklin Street
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 COUNTRY:
                  STATE:
                               ADDRESSEE: Fish a ALL
STREET: 225 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: 617-542-5370
TELEFAX: 617-542-8905
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                                                                                                                      HUMAN IMMUNOGLOBULIN VH GENE
SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
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                                                                 Richardson, P.C
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Pred. No.
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino
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                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 94662-8097
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA RELEASE #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,000
FILING DATE: 07-UN-1995
CLASSIETCATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
PETICATOR OF THE PAUL
NAME: SAVEREIDE, PAUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                        TELEFAX: (510) 655-354 INFORMATION FOR SEQ ID NO:
                                                                                                                                NAME: SAVENDLU,
REGISTRATION NUMBER: 36,914
REFERENCE/DOCKET NUMBER: 08:
TELECOMMUNICATION INFORMATION:
(510) 601-2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP93/00603
FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: 1: MOLECULE TYPE:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
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                                        SEQUENCE CHARACTERISTICS:
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REGISTRATION NUMBER: :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GGVLVQPG 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08475000
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Pred. No.
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; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-475-000-16
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                                                                                                         US-08-484-508-16
                                                                                                                          RESULT
                                                                                                                                                                                                                                                                                                                US-08-483-199-16
                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (510) UT 16:
INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
FRIGTH: 119 amino acids
                                                        Sequence 16, Applicat Patent No. 5948647 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 16, Application US/08483199 Patent No. 5849877
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APPLICANT: RING,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,199
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 36,914
REFERENCE/DOCKET NUMBER: 08
TELECOMMUNICATION INFORMATION:
             APPLICANT: RING, DAVID B. TITLE OF INVENTION: ANTIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES: 1
                                                                                                                                                                    1 GGVLVQPG 8
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8 GGVLVRPG 15
                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
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ZIP: 94662-8097
                                                                                                                                                                                                                                  Local Similarity
les 7; Conserv
                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
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                                                                                         Application US/08484508
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INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
                                                                                                                                                                                                                                   Conservative
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ANTIGEN-BINDING SITES OF ANTIBODY MOLECULES SPECIFIC FOR CANCER ANT 18
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Pred. No.
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: prot
US-08-484-508-16
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Best Local Similarity
7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (510) 655-3542 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484
FILING DATE: 07-JUN-195
CLASSIFICATION: 336
ATTORNEY/AGENT INFORMATION:
NAME: SAVERRIDE, PAUL
REGISTRATION NUMBER: 36,914
REFERENCE/DOCKET NUMBER: 0850
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 101-585
                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/
FILING DATE: 29-OCT-1993
                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 94662-8097
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ADDRESSEE: CHIRON CORPORATION
STREET: INTELLECTUAL PROPERTY -
                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                               ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East - Suite 500
CITY: Los Angeles
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                         CLASSIFICATION:
                                                                                                                                                                                                                                 COUNTRY:
ZIP: 900
                                                                             FILING DATE
                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 GGVLVRPG 15
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5891438
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SYSTEM: PC-DOS/MS-DOS
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51
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                                                                                                                                                                                                                                                                                                                                                                                                     VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
                   PCT/US93/10555
                                                                                              US/08/428,197
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Pred. No.
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Query Match
Best Local Similarity
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                                                                                                                                                                                         TELEPHONE: (619) 455-5110
TELEPAX: (619) 455-5110
INFORMATION FOR SEQ ID NO: 38:
SEQUENCE CHARACTERISTICS:
FRUGTH: 123 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity b...
7; Conservative
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GENERAL INFORMATION:
APPLICANT: SILVERMAN, GREGG T
                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOSTWARE: PATENTIN Felease #1.0,
CURRENT APPLICATION DATA:
APPLICATION UMBER: PCT/US93/1055
FILING DATE: 29-OCT 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (619) 455-511
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: HOWELLS, Stacy L.
REGISTRATION NUMBER: 34,842
REFERENCE/DOCKET NUMBER: FD.
TELECOMMUNICATION INFORMATION:
                                                                                                                                                            MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East - Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: MITHOD FOR STIMULATING PRODUCTION OF TITLE OF INVENTION: VARIABLE REGION GENE FAMILY RESTRICTED VACCINATION WITH A B-CELL SUPERANTIGEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: FD TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                           TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: amino acid
TOPOLOGY: linear
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                               1 GGVLVQPG 8
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 GGTLVQPG 15
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: California
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OR SEQ ID NO: 38:
                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Release #1.0, Version #1.25
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                                                                             Score 38; DB 5; Pred. No. 3.3;
                                                               Mismatches
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Sequence 42, Application US/08652558; Patent No. 5861155; GENERAL INFORMATION: APPLICANT: LIN, AUGUSTINE YEE-THARN TITLE OF INVENTION: HUMANIZED ANTIBODISTILE OF INVENTION: THEREOF NUMBER OF SEQUENCES: 52; CORRESPONDENCE ADDRESS: ADDRESSEE: BANNER & WITCOFF
                                                                                                                                                                      RESULT 10
US-08-652-558-42
                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Thes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 543-504
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, V. CURRENT APPLICATION DATA:
APPLICATION UNMERS: US/08/331,398A FILING DATE: 28-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Single Chain B3 Antibody Fusion Proteins TITLE OF INVENTION: and Their Uses (as amended)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS
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                                                                                                                                                                                                                                                8 GGGLVQPG 15
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One Market Plaza, Steuart Street Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15 amino acids
                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Willingham, Mark
FitzGerald, David
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                                                                              HUMANIZED ANTIBODIES AND USES
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                                                                                                                                                                                                                                                                                                                                            Score 35;
Pred. No.
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COMPUTER READABLE FORM:

COUNTRY:

STREET:

75 STATE STREET, 23RD FLOOR

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MASSACHUSETTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
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LENGTH: 15 amino acids
TYPE: Bmino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 617-345-9111
                                                                                                                                                                                     ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/652,558
FILING DATE: JUNE 6, 1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/IB94/00387
FILING DATE: NOVEMBER 21, 1994
ATTORNEY/AGENT INFORMATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
                                                         COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0, VC
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/331,397B
FILING DATE: 28-OCT-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 617-345-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: 3.5 inch diskette, 1.4 mb storage COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WordPerfect 6.1

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Pastan, Ira
APPLICANT: Benhar, Ital
                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity hes 7; Conserv
                                                                                                                                                                                                                                                             CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: YANKWICH, LEON R. REGISTRATION NUMBER: 30, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                COUNTRY:
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Specific Antibody Fragments, Fusion Proteins,
Thereof
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87.5%;
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Pred. No. 1.3;
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                                                                                                                                     Version #1.30
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Best Local :
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                                                                                                                      CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/331,398
FILING DATE: 28-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
ADDITION TO DATA:
ADDITION TO DATA:
BENEFIC ATTON MINDEED.

TO 1/506 200
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REGISTRATION NUMBER: 38,498
REFERENCE/DOCKET NUMBER: 0152
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION: 415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (415) 543-96
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 03-DEC-19
                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Willingha
APPLICANT: FitzGeral
APPLICANT: Brinkmann
APPLICANT: Pai, Lee
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FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
TELECOMMUNICATION INFORMATION:
                 APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen L.
REGISTRATION NUMBER: 32,762
REFERENCE/DOCKET NUMBER: 015280-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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mes 7; Conserv
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TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: San Francisco
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH:
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FitzGerald, David J.
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                                                                                                                                                                                                                                                                       03-DEC-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            83.3%;
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                 015280-126140US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 35;
Pred. No.
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS

65:

LENGTH:

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TOPOLOGY: 1:
; MOLECULE TYPE:
US-08-331-398A-55
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Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 55,
                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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                                                                                                                                                                        TELEFAX: (415) 543-50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                   NAME: HUNTER, TOM
REGISTRATION NUMBER: 38,498
REFERENCE/DOCKET NUMBER: 015280-126110US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Helease #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Single Chain B3 Antibody Fusion Proteins TITLE OF INVENTION: and Their Uses (as amended) NUMBER OF SEQUENCES: 68 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                         LENGTH: 18 amino acids TYPE: amino acid
                                                                                                            STRANDEDNESS
                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/331,398A FILING DATE: 28-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Street Plaza CITY: San Francisco
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FitzGerald, David
Brinkmann, Ulrich
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83.3%;
87.5%;
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Pred. No. 1.6;
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Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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BB
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           Length 18;
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Query Match
Best Local Similarity
""+"ches 7; Conserv
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                                                                                                              RESULT 15
US-08-331-397B-55
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US-08-401-908-14
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                                                                                   Sequence 55, Application US/08331397B
Patent No. 5981726
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                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: YOShinobu OKUNO et al.
TITLE OF INVENTION: A DNA WHICH CODES FOR THE VARIABLE REGION OF
APPLICANT: Pastan,
APPLICANT: Benhar,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/401
FILING DATE: MATCh 10, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Warren M. Cheek, Jr.
REGISTARION NUMBER: 33,367
REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 536
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
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                                                                                                                                                                                                     1 GGVLVQPG 8
                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
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                                                                                                                                                                          GGGLVQPG 15
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                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                      heavy chain of C179
Chimeric and Mutationally Stabilized Tumor-
Specific Antibody Fragments, Fusion Proteins, and Uses
Thereof
                                                                                                                                                                                                                                             83.3%;
87.5%;
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COUNTRY: USA
ZIP: 94105-1492
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN DATA:
APPLICATION NUMBER: US/08/331,397B
FILING DATE: 28-OCT-1994
CLASSIFICATION UMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION NUMBER: US 07/596,289
FILING DATE: 30-SEP-1991
PRIOR APPLICATION NUMBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
NAME: HUNCLE, Tom
REGISTRATION NUMBER: 015280-126120US
TELEPHAN: (415) 543-9600
TELEPHAN: (415) 543-9600
TELEPHAN: (415) 543-9600
TELEPHAN: (415) 543-9600
TELEPHAN: 18 amino acids
STRANDEDNESS:
US-08-331-397B-55
Search completed: June 13, 2001, 14:16:36 Job time: 497 sec
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                                                                                                                                                     Query Match 83.3
Best Local Similarity 87.5
Matches 7; Conservative
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Street Plaza
CITY: San Francisco
STATE: California
                                                                                                       1 GGVLVQPG 8
                                                                                     8 GGGLVQPG 15
                                                                                                                                                                       83.3%;
                                                                                                                                                       0; Mismatches
                                                                                                                                                                       Score 35; DB
Pred. No. 1.6;
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                                                                                                                                                       1; Indels
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.

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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
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/SIDS6/gcgdata/geneseq/geneseqp/AA1980.DAT:*
2: /SIDS6/gcgdata/geneseq/geneseqp/AA1981.DAT:*
2: /SIDS6/gcgdata/geneseq/geneseqp/AA1982.DAT:*
3: /SIDS6/gcgdata/geneseq/geneseqp/AA1983.DAT:*
4: /SIDS6/gcgdata/geneseq/geneseqp/AA1984.DAT:*
5: /SIDS6/gcgdata/geneseq/geneseqp/AA1985.DAT:*
6: /SIDS6/gcgdata/geneseq/geneseqp/AA1985.DAT:*
7: /SIDS6/gcgdata/geneseq/geneseqp/AA1987.DAT:*
8: /SIDS6/gcgdata/geneseq/geneseqp/AA1988.DAT:*
9: /SIDS6/gcgdata/geneseq/geneseqp/AA1988.DAT:*
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112:
113:
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116:
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Gapop 10.0 , Gapext 0.5
/SIDS6/gcgdata/geneseq/geneseqp/AA199.DAT:
/SIDS6/gcgdata/geneseq/geneseqp/AA2001.DAT:
/SIDS6/gcgdata/geneseq/geneseqp/AA2001.DAT:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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82.9 20 20 W94489 Human		9 34 82.9 8 21 Y79128 Peptide	82.9 8 21 Y79119	82.9 8 21 Y84661	85.4 115 20 Y27892 Human	87.8 115 20 Y42460	87.8 115 20 Y42459	87.8 8 21 Y79118	92.7 8 21 Y79124	100.0 8 21 Y79120	Result Query No. Score Match Length DB ID Descrip
	Ħ	Peptide antagonist	Peptide antagonist	Peptide antagnonis	secreted		Human guanylin pre	Peptide antagonist	Peptide antagonist	∍	Description

WPI; 2000-205565/18

(UYMA-) UNIV MARYLAND BALTIMORE

New peptide antagonist of zonulin useful as antiinflammatory agent for

## ALIGNMENTS

RESULT Y79120 Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy. W0200007609-A1. 05-JUN-2000 (first entry) Y79120; 03-AUG-1998; 28-JUL-1999; 17-FEB-2000 Synthetic. Peptide antagonist of zonulin. Y79120 standard; Peptide; 8 98US-0127815 99WO-US16683. Ą

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RESULT
Y79124
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 blood-brain barrier; antilnflammatory; cerebroprotective; neuroprotective; dermatcologica; antilcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosppressive; antiparasitic; vasotropic;
                      (UYMA-) UNIV MARYLAND EALTIMORE
                                                                                   03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                28-JUL-1999;
                                                                                                                                                                                                             17-FEB-2000
                                                                                                                                                                                                                                                                       WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                             gastrointestinal inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zonulin; antagonist; zonula occludens toxin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide antagonist of conulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y79124 standard; Peptide; 8 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor that the common sequence of the common motif of ZOT and human zonulins, which is believed to be critical for receptor that the common motif of ZOT and human zonulins, which is believed to be critical for receptor that the common motif of ZOT and the common motification and the commo
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1 ggvlvqdg 8
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ilarity 100.0%;
Conservative 0
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                                                                                   98US-0127815
                                                                                                                                          99WO-US16683
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
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Trecombinant DNA techniques. The peptide antagonists are used as an CC antiinflammatory agents in the treatment of gastrointestinal CC inflammation, where they bind to the ZOT receptor in the intestine CC inflammation, where they bind to the ZOT receptor in the intestine CC and yet does not physiologically modulate the opening of TJ in the CC intestine. Gastrointestinal inflammation conditions give rise to CC increased intestinal permeability and the peptide is useful for CC treating intestinal conditions that cause protein losing enteropathy CC caused by infection, e.g. Clostridium difficile infection, CC enterocolitis, shigellosis, viral gastroenteritis, parasite CC infestation, bacterial overgrowth, whipple's disease, diseases with CC mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, CC lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, CC sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical CC correction of congenital heart disease with Fontan's operation, CC mucosal disease, eosinophilic gastroenteritis, and immune disease, coeliac disease, eosinophilic gastroenteritis, and immune disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, and a surgical coeliac disease, eosinophilic gastroenteritis, and immune diseases, coeliac disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            which bind to a zonula occludens toxin (ZOT) receptor, functions which bind to a zonula occludens toxin (ZOT) receptor. Physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins, which is believed to be critical for receptor and human zonulins.
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 47; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   shigellosis, viral gastroenteritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-205565/18.
                                                                                                                                    systemic lupus
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                                                                                                                                    erythematosus
                                                                                                                 or food allergies, primarily
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              meningitis, encephalomyelitis
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RESULT
Y79118
                                                 밁
                                                              20
                                                                             Matches
                                                                                    Query Match
Best Local
Y79118;
             Y79118 standard; Peptide;
                                              1 GGVLVQDG 8
||:|||||
1 ggllvqdg 8
                            ω
                                                                                   Similarity
                                                                            Conservative
                                                                                  92.7%;
             ß
                                                                                  Score 38;
Pred. No.
                                                                            Mismatches
                                                                                   ω
                                                                         .2e+05;
0;
                                                                            Indels
                                                                           0
                                                                           Gaps
                                                                          0;
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В

21; Length 8;

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PF XXX
                                                                                                                  antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
 28-JUL-1999;
                                                                                              hypotensive; immunosuppressive; antiparasitic; gastrointestinal inflammation; therapy.
                                                                                                                                           Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective;
                                                WO200007609-A1
                                                                        Synthetic
                                                                                                                                neuroprotective; dermatological; antiulcer; antiviral;
                                                                                                                                                                                Peptide antagonist of zonulin.
                                                                                                                                                                                                          05-JUN-2000
                                                                                                                                                                                                         (first entry)
99WO-US16683
                                                                                            therapy
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RESULT
Y42459
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   and human zonulins, which is believed to be critical for receptor to binding. They can be prepared by chemical synthesis or by use of crecombinant DNA techniques. The peptide antagonists are used as an CC antiinflammatory agents in the treatment of gastrointestinal CC inflammation, where they bind to the ZOT receptor in the intestine CC inflammation, where they bind to the ZOT receptor in the intestine CC intestine. Gastrointestinal inflammation conditions give rise to CC increased intestinal permeability and the peptide is useful for CC treating intestinal conditions that cause protein losing enteropathy CC caused by infection, e.g. Clostridium difficile infection, CC infestation, bacterial overgrowth, whiple's disease, diseases with CC infestation or ulcerations, e.g. gastrits, gastric cancer, CC collagenous colltis, inflammatory bowel disease, diseases marked by imphatic obstruction, e.g. congenital intestinal lymphangicctasia, CC sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, CC mucogal disease, without ulceration, e.g. Menetrier's disease, cosinophilic gastroenteritis, and immune disease, cosinophilic gastroenteritis, paralleries, primarily to
                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor and performs to the prepared by chemical synthesis or by use of binding. They can be prepared by chemical synthesis or by use of
                                                                       Homo
                                                                                              Human; guanylin;
bacterium; heat :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Page 45; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New peptide antagonist of zonulin useful as antiinflammatory agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-205565/18
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                             Misc-difference
                                                                                                                                              Human
                                                                                                                                                                          21-DEC-1999
                                                                                                                                                                                                                                Y42459 standard; Protein; 115 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                    GGVLVQDG
                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                systemic
                                                                                                                                                                                                                                                                                                       ggvcvqdg
                                                                                                                                           guanylin preprohormone sequence.
                                                                                                  nylin; preprohormone; intestinal guanylate cyclase regulator;
heat stable enterotoxin; laxative; constipation.
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                                                                                                                                                                       (first entry)
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                            Location/Qualifiers
 /note= "encoded by GAN"
                /label- unknown
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                                                                                                                                                                                                                                                                                                                                                                            87.8%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                              Score 36; DB Pred. No. 3.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               food allergies,
                                                                                                                                                                                                                                                                                                                                                                                         DB 21;
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Best Local Similarity
""" hes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a human guanylin preprohormone which is cleaved to generate a 15 amino acid mature peptide (Y42458). This sequence is the encoded protein from a composite DNA sequence isolated by probing a human duodenum cDNA library with the corresponding rat coding sequence. Guanylin is an intestinal guanylate cyclase regulator which has similarity to bacterial heat stable enterotoxins which activate intestinal guanylate cyclases. The guanylin peptide can be used as a laxative in the treatment of constipation.
Disclosure; Fig 2; 14pp; English
                            Isolated protein used as a laxative in the treatment of constipation
                                                                                  Wiegand RC,
                                                                                                                                                                                                                                US5969097-A.
                                                                                                                                                                                                                                                                                                                                  Human guanylin preprohormone sequence
                                                                                                                                                                                                                                                                                                                                                                                            Y42460
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isolated protein used as a laxative
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N-PSDB; Z22677.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-JUN-1992;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-OCT-1999
                                                                                                                                            23-JUN-1992;
                                                                                                                                                                                                     19-OCT-1999
                                                                                                                                                                                                                                                                                        Human; guanylin; preprohormone; intestinal guanylate cyclase regulator; bacterium; heat stable enterotoxin; laxative; constipation.
                                                                                                                                                                                                                                                                                                                                                                21-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                       Y42460 standard;
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                                                                                                              (SEAR ) SEARLE & CO G
                                                                                                                                                                       23-JUN-1992;
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Pred.
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Best Local
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                                                                                                                                                                      17-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
07-NOV-1997;
                                                                                                                                                                                                                                                                                                                                                                                            Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS; cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteoporcosis; arthritis; testis; lung; thyroiditis; thyroid; digestion; endocrine; metabolism; regulation; malabsorption; gastritis; neoplasm.
                                                                                                               ( HUMA - )
                                                                                                                                                                                                                                                                                                              04-NOV-1998;
                                                                                                                                                                                                                                                                                                                                    20-MAY-1999
                                                                                                                                                                                                                                                                                                                                                          W09924836-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human secreted protein encoded by gene No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence represents a human guanylin preprohormone which is cleaved to generate a 15 amino acid mature peptide (Y42458). Guanylin is an intestinal guanylate cyclase regulator which has similarity to bacterial heat stable enterotox:ns which activate intestinal guanylate cyclases. The guanylin peptide can be used as a laxative in the treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-JUL-1999
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                                1999-337740/28
DB; X85048.
                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                               r KC, Ebner R,
H, Lafleur DW,
SM, Shi Y, Sop
                                                                  MS
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                                                                                                              HUMAN GENOME
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97US-00i4984.
97US-00i4985.
97US-00i4987.
97US-00i6098.
97US-00i6090.
97US-00i6094.
97US-00i6095.
97US-00i6089.
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97US-0054900
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                                                               W, Noore Pa
Soppet DR,
                                                                                                             SCI INC
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87.5%;
                                                               Findress GA, Feng
Noore PA, Ni J,
pret DR, Wei Y;
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Pred. No.
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Olsen
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                                                                        Janat F;
sen HS, R
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New human disorders

secreted proteins and coding sequences useful for treating of the immune system and hyperproliferative disorders

treating

immune-related

disorders, immune system

lator useful

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RESULT Y 84 6611 1D 4611 1D 46
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                     Suppression of antigen presenting cell mediated lymphocyte proliferation, by administering a Zot-related immunoregular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    celiac disease; Sjogren's syndrome; systemic lupus erythematosus; auto-immune thyroiditis; idiopathic thrombocytopenic purpura; hemolytic anemia; Grave's disease; Addison disease; autoimmune orchitis; pernicious anemia; vasculitis; autoimmune coagulopathy; polymyositis; myasthenia gravis; polyneuritis; pemphigus; rheumatic carditis; Dermatomyositis; scleroderma; asthma; psoriasis; eczematous dermatitis; Rarposi's sarcoma; inflammatory bowel disease; proliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; Zot; zonula occludens toxin; zonulin; antigen presenting cell; APC; lymphocyte proliferation; antigen; auto-immune disorder; immune system rejection; multiple sclerosis; organ transplantation; inflammatory disease; allergic disease; rheumatoid arthritis; insulin dependent diabetes mellitus;
                                                                                                                                                                                                                                                                                                                          (UYMA-) UNIV MARYLAND BALTIMORE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                09-SEP-1999;
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The invention relates to 125 novel genes and their fragments (nucleic acid sequences: x84933-x85057; amino acid sequences r27567-x27933) which are useful for preventing, treating or ameliorating medical conditions eight protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polypucleotides, based on which tissues they are most highly expressed in (see x84933 for described for described in see the second tissues they are most highly expressed in (see x84933 for described for described for described in see the second described for described for described in see x84933 for described for describ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-MAR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-JUL-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uses).
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87.5%;
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Example 7; Page 59; 95pp; English

subsequent to tissue or organ transplantation

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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anemia, vasculitis, autoimmune coagulopathies, myasthenia gravis, polyneuritis, pemphigus, rheumatic carditis, polymyositis, and scleroderma. The inflammatory or allergic disease or disorder is selected from asthma, psoriasis, eczematous dermatitis, Karposi's sarcoma, multiple sclerosis, inflammatory bowel disease, proliferative disorders of smooth muscle cells, and inflammatory conditions associated with mycotic, viral, parasitic, or bacterial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Immune-related disorders, immune system rejection subsequent to tissue or organ transplantation, or inflammatory or allergic diseases. The autoimmune or immune related disorders include multiple sclerosis, rheumatoid arthritis, insulin dependent diabetes mellitus, celiac disease, Sjogren's syndrome, systemic lupus erythematosus, auto-immune thyroiditis, idiopathic thrombocytopenic purpura, hemolytic anemia, Grave's disease, Addison disease, autoimmune orchitis, pernicious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       suppressing antigen presenting cell (APC)-mediated lympnocyte proliferation in a mammalian host pre-exposed to a particular antigen. The method comprises administering to the host an effective amount of a 20t-related immunoregulator selected from 20t (zonula occludens toxin) zonulin, the amount effective to down-regulate the activity of the APC.
WPI; 2000-205565/18
                                                                                                                                                                                                                                                                      gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                     neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antial hypotensive; immunosuppressive; antiparasitic; vasotro
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y79119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The method can be used to down-regulate APC-mediated lymphocyte proliferation in mammalian hosts suffering from auto-immune or
                                                                                                   03-AUG-1998;
                                                                                                                                     28-JUL-1999;
                                                                                                                                                                   17-FEB-2000
                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                        Zonulin; antagonist; zonula occludens toxin receptor; human;
blood-brain barrier; antiinflammatory; cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                          Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y79119 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                               (UYMA-) UNIV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present sequence represents a peptide antagonist of zonula occludens in (zot) polypeptide. The specification describes a method of pressing antigen presenting cell (APC)-mediated lymphocyte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ggvlvqpg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                 MARYLAND BALTIMORE
                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                   98US-0127815
                                                                                                                                   99WO-US16683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82.9%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 34; I
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .2e+05;
                                                                                                                                                                                                                                                                                                        antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine cand yet does not physiologically modulate the opening of TV in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglactasia, carcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetries's disease, coeliac disease, eosimphilic gastroenteritis, and immune diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           corresponding to residues 8-15 of human foetal intestinal zonulin. It is one of 25 peptide antagonists (see Y79105-29) of the invention that bind to a zonula occludens toxin (ZOT) receptor. Vet do not physiologically modulate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                that bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human zonulins,
                                                                           systemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The peptide antagonists are based on a common motif of ZOT nan zonulins, which is believed to be critical for receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             They can be prepared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69pp;
                                                                           erythematosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by chemical synthesis or by use
                                                                           or food
                                                                           allergies,
                                                                           6
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Query Match
Best Local
                               Matches
                                       Local Similarity
 μ
               1 GGVLVQDG 8
ggvlvqpg
                               7;
                              Conservative
8
                                      82.9%;
87.5%;
                               0
                                      Score 34;
Pred. No.
                              Mismatches .
                                       3.2e+05;
                                             DB 21;
                                             Length
                               Indels
                               0;
                               Gaps
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Sequence

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AA,

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PRX FXX
                                                                                                                                                                                                                                                                                              RESULT
Y79128
                                                                                                                                             blood-brain barrier; antiinflammatory; cerebroprotective;
neuroprotective; dermatological; antiulcer; antiviral;
antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
03-AUG-1998;
                       28-JUL-1999;
                                                                      WO200007609-A1
                                                                                              Synthetic
                                                                                                                      gastrointestinal
                                                                                                                                                                     Zonulin; antagonist; zonula occludens toxin receptor;
blood-brain barrier; antiinflammatory; cerebroprotect
                                                                                                                                                                                                                                 05-JUN-2000
                                                                                                                                                                                                                                                           Y79128;
                                                                                                                                                                                                          Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                  Y79128 standard; Peptide; 8 AA.
                                                                                                                                    nypotensive;
                                                                                                                                                                                                                                                                                                         9
                                                                                                                       immunosuppressive;
inal inflammation; t
                                                                                                                                                                                                                                 (first entry)
98US-0127815
                       99WO-US16683
                                                                                                                                 antiparasitic;
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RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This present sequence is that of a peptide antagonist of zonulin (C (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not C which bind to a zonula occludens toxin (ZOT) receptor, yet do not C (TJ). The peptide antagonists are based on a common motif of ZOT C and human zonulins, which is believed to be critical for receptor C binding. They can be prepared by chemical synthesis or by use of C recombinant DNA techniques. The peptide antagonists are used as an initial mumatory agents in the treatment of gastrointestinal C inflammation, where they bind to the ZOT receptor in the intestinal canditorially modulate the opening of TJ in the C intestine. Gastrointestinal inflammation conditions give rise to C increased intestinal conditions that cause protein losing enteropathy c treating intestinal conditions that cause protein losing enteropathy c caused by infection, e.g. Clostridium difficile infection, c enterocolitis, shigelissis, viral gastroenteritis, parasite c infestation, bacterial overgrowth, whipple's disease, diseases with C collagenous colitis, inflammatory bowel disease, diseases with course arcidosis and after surgical c sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical c correction of congenital heart disease with Fontan's operation, c collac disease, eosin-philic gastroenteritis, and immune diseases, c celiac disease, eosin-philic gastroenteritis, and immune diseases, c milk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
W09852415-A1
                                                                                                                                                                                                                                          Human foetal intestine zonulin N-terminal peptide
                                                                                                                           Homo
                                                                                                                                                      Zonulin; mammalian tight junction; zonula occludens toxin; ZOT; Vibrio cholerae; vaccire; cholera toxin; polyclonal antibody; intestinal mucosa; nasal mucosa; blood brain barrier.
                                                         Misc-difference
                                                                                                                                                                                                                                                                                               21-APR-1999
                                                                                                                                                                                                                                                                                                                                         W94489
                                                                                                                                                                                                                                                                                                                                                                            W94489 standard; peptide; 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 48; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (UYMA-) UNIV MARYLAND BALTIMORE
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                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGVLVQDG 8
|| }||||
1 ggglvqdg 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                             Location/Qualifiers
                                   /note= "unspecified'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82.9%;
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0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 34; DB 21;
Pred. No. 3.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 8;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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Misc-difference

Location/Qualifiers

/note= "unidentified residue"

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RESULT 11
Y79133
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Best Local Similarity
"atches 7; Conserv."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes pure zonulin which has an apparent CC molecular weight of 47 kD, as determined by SDS-PAGE, which is CC recognised by both anti-tau polyclonal antibody and by anti-zonula CC opening mammalian tight junctions. Zonulin proteins function as CC physiological modulators of mammalian tight junctions. They can be used CC physiological modulators of mammalian tight junctions. They can be used CC junctions of intestinal and nasal mucosa and across tight junctions of intestinal and nasal mucosa and across tight junctions of the blood brain barrier. Zonulin can be used with agents such as drugs, CC e.g. lidocaine, adenosine, dobutamine, dopamine, epinephrine, or convepinephrine, maloxone, ketorolac, midazolam, propofol, metacurine, CC unterprenorphine, naloxone, ketorolac, midazolam, propofol, metacurine, CC univacurium, succinylcholine, cytarabine, mitomycin doxorubicin, cefenicid, cefmetazole and azrreonam, a hormone e.g. cetoxitin, cefenicid, cefmetazole and azrreonam, a hormone e.g. testosterone, nandrolene, menotropins, insulin, urofolitropin, interferon-alpha, interferon-beta, interferon-gamma, interleukin-1 conteriors can also be used for the production of antibodies which can be used to assay for zonulin in body tissue or fluids, or in affinity-coparide of zonulin. The present sequence represents an N-terminal coparide of zonulin.
                                                                                                                                                       Human foetal intestine zonulin N-terminal sequence.
                                                                                           gastrointestinal inflammation;
                                                                                                                              Zonulin;
                                                                                                                                                                                                 05-JUN-2000
                                                                                                                                                                                                                                   Y79133;
                                                                                                                                                                                                                                                                 Y79133 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New purified zonulin - which is capable of reversibly opening mammalian tight junctions, used for enhancing the delivery of across intestinal and masal mucosa and blood brain barrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present invention describes pure zonumolecular weight of 47 kD, as determined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2; Page 45; 64pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                    1 GGVLVQDG
                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                    ggvlvqpg 15
                                                                                                               blood-brain
                                                                                                        antagonist; zonula occludens toxin receptor;
lood-brain barrier; antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                    œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΑĄ;
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                                                                                                                                                                                                                                                                 Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                   82.9%;
87.5%;
                                                                                                                                                                                                                                                                 20
                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                Score 34; DB
Pred. No. 4.5;
0; Mismatches
                                                                                                                                                                                                                                                                 A
                                                                                        therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
4.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 20;
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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RESULT
R52775
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Best Local S
Matches 7
                                                              13-NOV-1992;
13-NOV-1992;
28-SEP-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to be involved in receptor binding. Peptide antagonists (see Y79105-29) based on this motif are useful as antiinflammatory agents for treatment of gastrointestinal inflammation, and fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human intestinal zonulin. The N-terminal sequences of human adult and foetal zonulins (see Y79130-36) were compared with Vibrio cholaronula occludens toxin (ZOT) to identify a common motif thought
Chimeric human-murine polypeptide(s) specific for human mammary
                     WPI; 1994-183509/22.
                                                                                                         15-NOV-1993;
                                                                                                                              26-MAY-1994
                                                                                                                                                  WO9411508-A
                                                                                                                                                                       Mus musculus
                                                                                                                                                                                             chimeric
                                                                                                                                                                                                                            Murine BrE-3
                                                                                                                                                                                                                                                                      R52775;
                                                                                                                                                                                                                                                                                         R52775 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence is that of the N-terminal region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-205565/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fagano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-JUL-1999;
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                                                                                                                                                                                                                                                 24 -JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VIND (-VWAD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200007609-A1
                                         (CANC-)
                                                                                                                                                                                          (mmunoglobulin variable domain; primer; polymerase chain reaction;
chimeric antibody; human milk fat globule; BrE-3 VL-chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         reatment of conditions associated with breakdown of the blood-brain
                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity conserv
                                                                                                                                                                                                                                                                                                                12
                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                 1 GGVLVQDG
                                                                                                                                                                                                                                                                                                                                             CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F1g 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MARYLAND BALTIMORE
                                                                                                                                                                                                                           immunoglobulin heavy chain variable domain N-terminus
                                                                                                                                                                                                                                                (first entry)
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                                                             92US-0977706.
92US-0977707.
93US-0128015.
                                         RES FUND
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                                                                                                        93WO-US11316
                                                                                                                                                                                                                                                                                           Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69pp;
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                Score 34;
Pred. No.
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                                         COSTA
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RESULT
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                                                                                                                                                                                                                                                                                                        16-NOV-1992;
30-SEP-1993;
08-OCT-1993;
Primers JO2, JO3, JO4, JO14 and VH1BACK (Q62765-Q62769) were all used to prepare cDNAs that encode the BrE-3 mouse Ig variable domains. The amplified V-regions lacked constant regions so as to produce less immunogenic polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions. The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The amino acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. R52792 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Primers JO2, JO3, JO4, JO14 and VH1BACK (Q62740-Q62744) were all used to prepare cDNAs that encode the BrE-3 mouse Ig variable domains. The amplified V-regions lacked constant regions so as to produce less immunogenic polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions. The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The amino acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. R52774 and R52775). The general agreement between the predicted and the
                                                                                                                                                                                               New analogue peptide(s) comprising antibody variable regions used to develop prods. for use in the detection, diagnosis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Immunoglobulin chimeric antibo
                                                                                                                                                      Example 12;
                                                                                                                                                                                                                                              WPI; 1994-183510/22.
                                                                                                                                                                                                                                                                                                                                                                                                                               WO9411509-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Murine BrE-3 immunoglobulin heavy chain variable domain N-terminus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R52793 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 11;
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                                                                                                                                                                                 therapy
                                                                                                                                                                                                                                                                          (CANC-) CANCER
                                                                                                                                                                                                                                                                                                                                                                   16-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                26-MAY-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   determined amino acid sequences that the cloned cDNAs encode BrE-3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
nes 7; Conserv
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                                                                                                                                                                                  and prevention of neoplasms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25 AA;
                                                                                                                                                      Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 32; 54pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                        92US-0977696.
93US-0129930.
93US-0134346.
                                                                                                                                                                                                                                                                          RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      variable domain;
                                                                                                                                                                                                                                                                                                                                                                   93WO-US11445
                                                                                                                                                    53; 54pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
                                                                                                                                                                                                                                                                            FUND CONTRA COSTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lable domain; primer; polymerase chain reaction; human milk fat globule; BrE-3 VL-chain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.98;
87.58;
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This present sequence is that of a peptide antagonist of zonulin (C12), one of 25 such peptides (see Y79105-29) of the invention, CC which bind to a zonula occludens toxin (ZOT) receptor, yet do not CC physiologically modulate the opening of mammalian tight junctions CC (TJ). The peptide antagonists are based on a common motif of ZOT CC and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthésis or by use of CC recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agent; in the treatment of gastrointestinal CC inflammation, where they bind to the ZOT receptor in the intestine CC and yet does not physiologically modulate the opening of TJ in the CC intestine. Gastrointestinal inflammation conditions give rise to concreased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy CC caused by infection, e.g. Clostridium difficile infection, caused by infection, e.g. Clostridium difficile infection, caused by infection, e.g. Clostridium difficile sparasite infestation, bacterial overgrowth, whipple's disease, diseases with CC collagenous colitis, inflammatory bowel disease, diseases marked by
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Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 42; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                           New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antihinflammatory; cerebroprotective; neuroprotective; dermatological; antiher; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic;
                                                                                                                                                                                                                                                                                                                                                                                shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y79108 standard; Peptide; 8 AA.
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7; Conserv
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87.5%;
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5.7;
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and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropath,
                                                                                                                                          This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding.
                                                                                                                                                                                                                                                                      Claim 1; Page 46; 69pp;
                                                                                                                                                                                                                                                                                                New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-205565/18.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal disease without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gastrointestinal inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibacterial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Y79122;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hypotensive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide antagonist of zonulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cytostatic; anti-HIV; vulnerary; antiallergic;
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                                                                                                                                                                                                                                                                      English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 21;
3.2e+05;
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   enteropathy
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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                            Result
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                                                                                                                                                                                                                                                                                                                                                               Score
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Match
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pir2:*
pir3:*
pir4:*
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           $38459
$30950
$3638
$27784
$62191
T$0548
H70915
F83627
                                                                                                       $42532
$78561
$70655
A75471
$61491
T09401
T06552
B64924
E65127
A70315
B83065
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                                hypothetical prote phenylethanolamine 5-methyltetrahydro GTP cyclohydrolase
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hypothetical 97.1
AP4A hydrolase - A
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glucan endo-1,3-be
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probable nitrogen
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plasma protein Z -
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CS3 pilin synthesi
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C transporter, A
xI protein - Rhi
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32 78.0 529 1 DTECPH purh bifunctional 32 78.0 530 2 C82344 phosphoribosylamin 32 78.0 532 2 B64100 purb bifunctional 32 78.0 532 2 B64100 purb bifunctional 32 78.0 769 2 B83307 probable molyddopt 32 78.0 825 2 H64083 bifunctional 32 78.0 1034 2 T22166 protes 32 78.0 1034 2 T22166 protes 32 78.0 1302 2 B41249 protes 31 75.6 120 2 S44111 representation V-D 31 75.6 151 2 A83333 probable deaminase 31 75.6 169 2 G75319 probable deaminase 31 75.6 169 2 G75319 probable deaminase 31 75.6 169 2 G75319 protestical protes 31 75.6 193 2 D82271 protestical protest	45
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## ALIGNMENTS

polyprotein - tomato
C;Species: Lycopersicon esculentum (tomato)
C;Species: Lycopersicon esculentum (tomato)
C;Date: 15-Oct-1999 #sequence\_revision 15-Oct-1999 #text\_change 11-May-2000
C;Accession: T17459
R;Parniske, M.; Jones, J.D.
Proc. Natl. Acad. Sci. U.S.A. 96, 5850-5855, 1999
A;Title: Recombination between diverged clusters of the tomato Cf-9 plant di
A;Reference number: Z18801; MUID:99254130
A;Accession: T17459

plant disease

A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-1542 cPAR> A;Cross-references: EMBL:AF119040; NID:g4235640; PID:g4235644; PIDN:AAD13304.1

2;

Length 1542;

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guanylin precursor [validated] - human
C;Species: Homo sapiens (man)
C;Date: 21-Sep-1993 #sequence_revision 26-May-1995 #text_change 08-Dec-2000
C;Accession: A46279; S29228; S29807
R;de Sauvage, F.J.; Keshav, S.; Kuang, W.J.; Gillett, N.; Henzel, W.; Goeddel, D.V.
Proc. Natl. Acad. Sci. U.S.A. 89, 9089-9093, 1992
A;Title: Precursor structure, expression, and tissue distribution of human guanylin.
A;Reference number: A46279; MUID:93028409
A;Accession: A46279; MUID:93028409
                              A;Molecule type: mRNA
A;ResIdues: 1-115 <WIES>
A;Cross-references: GB:M97496; NID:g183414; PIDN:AAA35915.1; PID:g183415
A;Cross-references: GB:M97496; NID:g183414; PIDN:AAA35915.1; PID:g183415
R;Kuhn, M.; Raida, M.; Adermann, K.; Schulz-Knappe, P.; Gerzer, R.; Heim, J.M.; Forss
FEBS Lett. 318, 205-209, 1993
                                                                                                                                                                                        A;Cross-references: GB:M95174; NID:g306823; PIDN:AAA58625.1; PID:g306824 A;Note: sequence extracted from NCBI backbone (NCBIN:115377, NCBIF:115378) R;Wlegand, R.C.; Kato, J.; Huang, M.D.; Fok, K.F.; Kachur, J.F.; Currie, M FEBS Lett. 311, 150-154, 1992 A;Title: Human guanylin: cDNA isolation, structure, and activity. A;Reference number: S29228; MUID:93011964 A;Accession: S29228
                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: mRNA
A; Residues: 1-115 <DE1>
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Best Local Similarity
Matches 7; Conser
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The circulating bioactive form of human guanylin is a high molecular weight
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87.5%;
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Pred. No.
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Y, Rieger,
                    hypothetical protein Rv3885c
C; Species: Mycobacterium tub
C; Date: 17-Jul-1998 #sequence
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F70597
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R;Kunst, F; Ogasawara, N.; Moszer, I.; Albertini, A.M.; Alloni, G.; Azevedo, V.; Berter C.; Bron, S.; Brouillet, S.; Bruschi, C.V.; Caldwell, B.; Capuano, V.; Carter, N.M.; Cha A; Ebrilich, S.D.; Emmerson, P.T.; Entlan, K.D.; Errington, J.; Fabret, C.; Ferrari, E. A.Authors: Foulger, D.; Fritz, C.; Fujita, M.; Fujita, Y.; Fuma, S.; Galizzi, A.; Galler lech, J.; Harwood, C.R.; Henaut, A.; Hilbert, H.; Holsappel, S.; Hosono, S.; Hullo, M.F. Koetter, P.; Koningstein, G.; Krogh, S.; Kumano, M.; Kurita, K.; Lapidus, A.; Lardinois, A.Authors: Lauber, J.; Lazarevic, V.; Lee, S.M.; Levine, A.; Liu, H.; Masuda, S.; Maueell, M.; Ogawa, K.; Ogiwara, A.; Oudega, B.; Park, S.H.; Parro, V.; Pohl, T.M.; Portetelle Rleger, M.; Rivolta, C.; Rocha, E.; Roche, B.; Rose, M.; Sadaie, Y.; Sato, T.; Scanlon, A.Authors: Schleich, S.; Schoeter, R.; Scoffone, F.; Sekiguchi, J.; Sekowska, A.; Serot akeuchi, M.; Tamakoshi, A.; Tanaka, T.; Terpstra, P.; Tognoni, A.; Tosato, V.; Uchiyama, A.; Authors: Yoshikawa, H.F.; Zumstein, E.; Yoshikawa, H.; Danchin, A.
A.; Title: The complete genome sequence of the Gram-positive bacterium Bacillus subtilis. A.; Accession, F69947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Experimental source: plasma
A;Note: amino-terminal sequencing of mature form and molecular weight
C;Comment: Guanylin is an endogenous ligand for an intestine-specific
c;Genetics:
C;Genetics:
A;Gene: GDB:GUCA2
A;Cross-references: GDB:13(460; OMIM:139392
A;Map position: 1p35-1p34
C;Keywords: hormone; intestine
F;1-21/Domain: signal sequence #status predicted <SIG>F;22-115/Product: guanylin #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:Z991..7; GB:AL009126; NID:g2634966; PIDN:CAB14549.1; PID:e1183837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-305 < KUN>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            phage-related protein homolog yqbK - Bacillus subtilis
C;Species: Bacillus subtilis
C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 15-Oct-1999
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A; Accession: S29807
A; Molecule type: protein
A; Residues: 22-68 <KUH>
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Best Local :
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Best Local
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                 #sequence_revision
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75.0%;
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67.5%;

    Mycobacterium tuberculosis (strain H37RV)

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                                                                                                                                                                                                                                                                                                    Score 35;
Pred. No.
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     17-Jul-1998 #text_change 22-Oct-1999
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A;Status: preliminary A;Molecule type: DNA
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R;Kahn, D.; David, M.; Domergue, O.; Daveran J. Bacteriol. 171, 929-939, 1989 A;Title: Rhizoblum meliloti fixGHI sequence A;Reference number: A32052; MUID:89123173 A;Accession: C32052
                                                                                                                     C;Species: Rhizobium meliloti
C;Date: 13-Jul-1989 #sequence_revision 13-Jul-1989 #text_change 11-Jan-2000
C;Cate: 13-Jul-1989 #sequence_revision 13-Jul-1989 #text_change 11-Jan-2000
C;Cate: S32847; S39994
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Best Local Similarity
Matches 6; Conserve
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A;Map position: 1
C;Superfamily: unassigned ATP-binding cassette proteins;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-006 <WHI>
A:Cross-references: GB:AE001878;
A:Experimental source: strain R1
C:Genetics:
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Science 286, 1571-1577, 1999
A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans RA;Reference number: A75250; MUID:20036896
                                                                                                                                                                                                  FixI protein - Rhizobium meliloti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABC transporter, ATP-binding protein, MsbA family - Deinococcus radiodurans C:Species: Deinococcus radiodurans C:Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 17-Mar-2000 C:Accession: A75554
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A;Authors: Squares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987
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Best Local Similarity
7; Conserv
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A;Experimental source: strain H37Rv
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                                                                                                                                                                                                                                                                                                                              561 GGVVVEDG 568
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            uence of the radioresistant bacterium Deinococcus radiodurans R1. A75250; \mbox{MUID}\colon 20036896
                                                                                                                                                                                                                                                                                                                                                                                                                                            85.4%;
75.0%;
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Pred. No. 27;
0; Mismatches
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Pred. No.
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Mismatches
                                                                                            Daveran, M.L.; Ghai, J.; Hirsch,
                                                predicts involvement of a
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C:Comment: Protein 2 is a single-chain plasma glycoprotein of unknown function. A and has no enzymatic activity.

C:Superfamily: coagulation factor X; EGF homology; Gla domain homology; trypsin hc; Reywords: bete-hydroxyaspartic acid; calcium binding; carboxyglutamic acid; gly:F;1-46/Domain: Gla domain homology (fragment) <GLA>
F:1-45/Domain: Gla domain homology (fragment) <GLA>
F:51-82/Domain: EGF homology <EGLA>
F:59-125/Domain: EGF homology <EGCA>
F:7,8-11.15.17.20, 21.26, 27.30, 33.36,40/Modified site: gamma-carboxyglutamic acid
F:59,191,289/Binding site: carbohydrate (Asn) (covalent) *status experimental
F:64/Modified site: erythro-beta-hydroxyaspartic acid (Asp) *status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Residues: 1-757 <KAH>
A; Residues: 1-757 <KAH>
A; Cross references: EMBL: Z21854; NID: 949403; PIDN: CAA79907.1; PID: 949414
C; Superfamily: Enterococcus copper-transporting ATPase copA; ATPase nucle
C; Keywords: phosphoprotein; transmembrane protein
F; 162-495/Domain: ATPase transduction domain homology <ATT>
F; 557-699/Domain: ATPase nucleotide-binding domain homology <ATN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Geisel, C.; Wamsley, P.
submitted to the EMBL Data Library, May 1998
submitted to the sequence of C. elegans cosmid H11E01.
                                                                                                                                                                                                                                                                                                           R;Hoejrup, P.; Jensen, M.S.; Petersen, T.E. FEBS Lett. 184, 333-338, 1985
A;Title: Amino acid sequence of bovine protein A;Reference number: A22171; MUID:85204370
A;Accession: A22171
                                                                                                                                                                                                                                                                                                                                                                                                                            plasma protein 2 - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 27-Nov-1985 #sequence_revision 27-Nov-1985 #text_change 16-Jul-1999
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Best Local Similarity
Matches 6; Conser
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Pred. No. 39;
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                            A; Molecule type: DNA
A; Residues: 451-753
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                                                                         A; Accession:
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        A;Cross-references: EMBL:X16944; NID:g41155; PIDN:CAA34818.1; PID:g41159
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                                                                         S07902
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CS3 pilin synthesis protein, 104K - Escherichia coli
N;Contains: CS3 pilin synthesis protein, 104K; CS3 pilin synthesis protein, 20K; CS
C;Species: Escherichia coli
C;Date: 13-Sep-1998 #sequence_revision 13-Sep-1998 #text_change 21-Jul-2000
C;Accession: S78561; S07900; S07901; S07902; S07903
R;Jalajakumari, M.B.; Thomas, C.J.; Halter, R.; Manning, P.A.
Mol. Microbiol. 3, 1685-1695, 1989
A;Title: Genes for biosynthesis and assembly of CS3 pili of CFA/II enterotoxigenic
A;Reference number: S07899; MUID:90158116
A;Accession: S78561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Note: the source is designated as Anacystis nidulans R2 (?Superfamily: Synechococcus hypothetical protein 1; tetratricopeptide F;283-316/Domain: tetratricopeptide repeat homology <TT2> F;317-350/Domain: tetratricopeptide repeat homology <TT3> F;351-384/Domain: tetratricopeptide repeat homology <TT3>
                                                         A; Molecule type: DNA
A; Residues: 317-753 <JAF>
A; Cross-references: EMBL:X16944; NID:g41155;
A; Experimental source: strain PB176
                                                                                                                                                                    A;Cross-references: EMBL:X16944; NID:g41155; A;Experimental source: strain PB176
                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 181-753 < JAW>
                                                                                                                                                                                                                                                                                              A; Cross-references: EMBL: X16944
A; Experimental source: strain P
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A; Residues: 1-937 <JAL>
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A;Title: Cloning and characterisation of genes A;Reference number: S42531; MUID:94169298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Synechococcus sp.
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change
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A;Residues: 1-403 <JON>
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Pred. No.
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Pred. No.
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                                                                                    PIDN:CAA34817.1;
                                                                                                                                                                                          PIDN:CAA34816.1;
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science 286, 1571-1577, 1999
A;Title: Genome sequence of the A; Reference number: A75250; M
A; Accession: A75471
A; Accession: A75471
                                                                                                                                                              probable nitrogen regulator - Deinococcus radiodurans (strain R1) (1) Species: Deinococcus radiodurans (c) Species: Deinococcus radiodurans (c) Species: Deinococcus radiodurans (c) Species: Deinococcus radiodurans (c) Accession: A75471 (c) Requence_revision (d) -Dec-1999 #text_change d: C; Accession: A75471 (d) Redelberg, J.F.; Hickey, E.K.; Peterso, R.White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterso, M.; Shen, M.; Vanathevan, J.J.; Lam, P.; McDonald, L.; Utterbac S.; Smith, H.O.; Venter, J.C.; Fraser, C.M. Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2-demethylmenaquinone 2-C-mathyltransferase (EC 2.1.1.-) menG [similarity] - My (species: Mycobacterium tuberculosis C;Date: 17-Jul-1998 #sequen:e_revision 17-Jul-1998 #text_change 02-Sep-2000 C;Accession: B70655

R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Daviin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Ho Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998

A;Authors: Sqares, R.; Sulsion, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complet A;Reference number: A70500; MUID:98295987

A;Accession: B70655
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A;Accession: S07903
A;Molecule type: DNA
A;Redession: S72-753 <JAZ>
A;Molecule type: DNA
A;Residues: 572-753 <JAZ>
A;Cross-references: EMBL:X16944; NID:g41155; PIDN:CAA34819.1; PID:g4116
A;Experimental source: strain PB176
C;Function:
A;Description: involved in the biosynthesis of CS3 pili
E;1-937/Product: CS3 pilin synthesis protein, 104K #status predicted of F;317-753/Product: CS3 pilin synthesis protein, 48K #status predicted of F;451-753/Product: CS3 pilin synthesis protein, 33K #status predicted of F;451-753/Product: CS3 pilin synthesis protein, 33K #status predicted of F;451-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis protein, 20K #status predicted of F;572-753/Product: CS3 pilin synthesis pr
A;Residues:
                                A;Status: preliminary A;Molecule type: DNA
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A;Residues: 1-157 <COL>
A;Residues: 1-157 <COL>
A;Cross-references: GB:2838(4; GB:AL123456; NID:g3261687; PIDN:CAB06213.1; PID:e301444;
A;Experimental source: strain H37Rv
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type: DNA
1-213 <WHI>
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Utterback,
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T.; Zalewski,
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R;Clouse, J.A.
submitted to the EMBL Data
A;Reference number: Z16664
A;Accession: T09401
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                                                                                                    A; Pathway: polysaccharide degradation C; Superfamily: beta-1,3-glucanase C; Keywords: glycosidase; hydrolase; p
                                                                                                                                                                A;Cross-references: EMBL:U27179; NID:g862930; PID:g862931
A;Experimental source: subspecies sativa, cultivar Apollo
                                                                                                                                                                                                                                                                                                                    1,3-beta-glucanase (EC 3.2.1.-), acidic - C;Species: Medicago sativa (alfalfa) C;Date: 11-Jun-1999 #sequence_revision 11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inclusion membrane protein A - Chlamydophila psittaci (;Species: Chlamydophila psittaci, Chlamydia psittaci (;Date: 27-Apr-1996 #sequence_revision 13-Mar-1997 #tc (;Accession: S61491 R;Rockey, D.D.; Heinzen, R.A.; Hackstadt, T. Mol. Microbiol. 15, 617-626, 1995 A;Title: Cloning and characterization of a Chlamydia pa;Accession: S61491 A;Accession: S61491 A;Accession: S61491 A;Accession: S61491 A;Status: preliminary and characterization of a Chlamydia pa;Status: preliminary
                                                                                                                                                       C; Function:
                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-368 <CLO>
                                                                                                                                                                                                                               A; Status: translated from GB/EMBL/DDBJ
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A; Residues: 1-355 < ROC>
A; Cross-references: EMB
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C;Superfamily: regulatory
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A; Gene: DR0834
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Best Local Similarity 85.7
Matches 6; Conservative
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                                          Score 33;
Pred. No.
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C;Superfamily: beta-1,3-glucanase
C;Keywords: glycosidase; hydrolase; polysaccharide degradation
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'Accession: T06552; S2843U
'Chang, M.M.; Culley, D.E.; Hadwiger, L.A.
'Ishang, M.M.; Culley, D.E.; Hadwiger, L.A.
'Ishar Physiol. 101, 1121-1122, 1993
'Ishar Physiol. 10
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N;Residues: 32-370 <CHA2>
N;Cross-references: GB:S51479; NID:g261211; PIDN:AAB24398.1; PID:g261212
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Lant Mol. Biol. 20, 609-618, 1992
;Title: Molecular characterization of a pea beta-1,3-glucanase induced by Fusarium sola;Reference number: S28430; MUID:93081722
;Accession: S28430
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Best Local Similarity 85.7
Matches 6; Conservative
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Date: 23-Apr-1999 #seguence_revision 23-Apr-1999 #text_change 18-Aug-2000
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233 GYMYQDG 239
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85.7%;
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Pred. No. 47;
1; Mismatches 0; Indels
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YCOA_SYNP7
CS32_ECOL1
E13B_PEA
A2BP_HWOUSE
A2BP_HWOUSE
A2BP_HOUSE
AEIN
GCH2_ACTPL
PUR9_ECOL1
PUR9_ECOL1
BISC_HAEIN
MDR5_DROME
YCBQ_ECOL1
PUR9_BCOL1
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GUAC_ECOL1
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P18398 rhizobium m
P00744 bos taurus
P42460 synechococc
P15484 escherichia
Q03467 pisum sativ
Q9j43 mus musculu
Q9nwbi homo sapien
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P79897 sus scrofa
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P34224 caenorhabdi
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Q9y6c5 homo sapien
Q12674 saccharomyc
P52143 escherichia
P10664 cavia porce
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CTURE BY NMR OF 101-115. INE-95034794; PubMed-794 ton N.J., Garcia K.C., G ermination of the soluti ylin: observation of an hemistry 33:13581-13592( FUNCTION: ENDOCENOUS ACT IT STIMULATES THIS ENTEM AS THE HEAT-STABLE ENTER TISSUE SPECIFICITY: HIGH SIMILARITY: BELONGS TO T STABLE ENTEROTOXINS.	.A.  , Keshav S.,  , Keshav S.,  , Keshav S.,  cture, expres  d. Sci. U.S.  f. Sci. U.S.  d. Sci. U.S.  f. Sci. U.S.  d. Sci. U.S.  f. Sci. U.S.  d. Sci. U.	26, Createc 26, Last se 40, Last ar R (GUANYLATI an). a; Chordata; a; Primates; a; Primates; cDNA 1solat; cDNA 1solat; cDNA 1solat; cDNA 1solat;	116 2 247 2 248 2 248 2 248 2 274 2 275 2 357 2 350 2 362 2 463 2 515
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YQBK_BACSU
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Matches 7
                     MEDLINE-96084975; PubMed-7489895;
Medigue C., Moszer I., Viari A., Danchin A.;
"Analysis of a Bacilius subtilis genome fragment using a computer system prototype.";
Gene 165:GC37-GC51(1995).
-1- SIMILARITY: STRONG, TO B. SUBTILIS XKDK.
-1- CAUTION: REF.1 SEQUENCE DIFFERS FROM THAT SHOWN FROM ONWARD AND IS SHORTER (226 AA) DUE TO A FRAMESHIFT.
                                                                                                                                                           STRAIN=168 / JH642;
Kobayashi Y., Mizuno
Sato T., Takeuchi M.;
                                                                                                                                                                                                             STRAIN-168 / JH642;

MEDLINE-95219086; PubMed-7704261;

Takemaru K.-I., Mizuno M., Sato T., Takeuchi M.,

"Complete nucleotide sequence of a skin element e
rearrangement during sporulation in Bacillus subt
Microbiology 141:323-327(1995).
                                                                                                                                                                                                                                                                                                      Bacillus subtilis.

Bacteria; Firmicutes; Facillus/Clostridium group;
Bacillus/Staphylococcus group; Bacillus.

NCBI_TaxID-1423;
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PRINTS; PR00774; GUANYLIN.
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SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
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1GNB; 30-SEP-94.
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RESULT 3
FIXI_RHIME
ID FIXI RHIME
AC P18398;
DT 01-NOV-1990
DF (EC 3.6.1.-)
GN Rhizobium mm
OG Plasmid psylor
OC Rhizobiaceae
OX NCBL_TaxID=.
RN [1] ENCETIA;
PO RHIZOBIACE PR
RC STRAIN-RCR2I
RX MEDLINE-891:
RA BAUL J.
RO SYMBIOTION
CC -1- FUNCTION
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EMBL; 221854; CAA79907.1; -
PIR; C32052; C32052.
PIR; S3994; S3994.
PIR; S32847; S32847.
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01-NOV-1990 (Rel. 1
30-MAY-2000 (Rel. 3
NITROGEN FIXATION P
(EC 3.6.1.-).
                                                                                                                                                                                                                                                                                                                                                                                                                                                Specific cation pump in symbiotic nitrogen fixation.";

J. Bacteriol. 171:929-939(1999).

I. FÜNCTION: FIXI IS A PUMP OF A SPECIFIC CATION INVOLVED IN SYMBIOTIC NITROGEN FIXATION. THE FOUR PROTEINS FIXG, FIXH, FIX AND FIXS MAY PARTICIPATE IN A MEMBRANE-BOUND COMPLEX COUPLING THE FIXI CATION PUMP WITH A REDOX PROCESS CARALYZED BY FIXG.

I. CATALYZIC ACTIVITY: ATP + H(2)0 = ADP + ORTHOPHOSPHATE.

I. SUBCLIULAR LOCATION: INTEGRAL MEMBRANE PROTEIN.

I. SIMILARITY: BELONGS TO THE CATION TRANSPORT ATPASES FAMILY (E1-E2 ATPASES). SUBFAMILY IB.

I. SIMILARITY: CONTAINS 1 HEAVY-METAL-ASSOCIATED (HMA) DOMAIN.
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entitles requires a license agreement (so
or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-RCR2011 / SU47;
MEDLINE-89123173; PubMed-2536685;
Kahn D., David M., Domergue O., E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plasmid pSymA (megaplasmid Bacteria; Proteobacteria; al Rhizobiaceae; Sinorhizobium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; D32216; BAA06943.1; ALT_FRAME. EMBL; D84432; BAA12406.1; -. EMBL; Z99117; CAB14549.1; -. SubtiList; BG11282; yqbK.
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P00744;
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21-JUL-1986
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DOMAIN
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MOD_RES
SEQUENCE
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DOMAIN
                           epidermal growth factor-like domain of protein Z and bovine protein Z."; J. Biol. Chem. 264:20320-20325(1989).
                                                     STRUCTURE OF CARBOHYDRATE ON SER-53.
MEDLINE=90062160; PubMed=2511201;
MIShimura H., Kawabata S., Kisiel W., Hase S
Shimonishi Y., Iwanaga S.;
"Identification of a disaccharide (Xyl-Glc)
(Xyl2-Glc) O-glycosidically linked to a seri
                                                                                                                     MEDLINE-85204370; PubMed-3888670;
Hoejrup P., Jensen M.S., Petersen T.E.;
"Amino acid sequence of bovine protein
serine protease homolog.";
FEBS Lett. 184:333-338(1985).
                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea Bovidae; Bovinae; Bos.
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STRUCTURE OF CARBOHYDRATE ON SER-53. MEDLINE-91344709; PubMed-2129367;
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Pfam; PF00403; HMA; 1.
PROSITE; PS00154; ATPASE_E1_E2;
PROSITE; PS01047; HMA; 1.
                                                                                                                                                                                   Bovidae; Bovinae; Bos.
NCBI_TaxID=9913;
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PHOSPHORYLATION (PROBABLE)
DE2E5C6249254AA5 CRC64;
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POTENTIAL.
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Pred. No. 21;
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CYTOPLASMIC (POTENTIAL).
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EXTRACELLULAR (POTENTIAL)
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InterPro; IPRO0054;
InterPro; IPRO00561;
InterPro; IPRO01254;
InterPro; IPRO01254;
InterPro; IPRO01254;
InterPro; IPRO00283;
Pfam; PF00008; EGF; 2.
Pfam; PF00099; trypsin; 1.
Pfam; PF00099; trypsin; 1.
PFNNTS; PR00001; GLABLOOD.
PROSITE; PS00011; GLABLOOD.
PROSITE; PS00011; GLAL CARBOXYLATION; 1.
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"A new trisaccharide sugar chain linked to a serine residue in the
first EGF-like domain of clotting factors VII and IX and protein Z.";
Adv. Exp. Med. Biol. 281:121-131(1990).

-1- FUNCTION: SINGLE-CHAIN PLASMA GLYCOPROTEIN OF UNKNOWN FUNCTION.
-1- SUBCELLULAR LOCATION: EXTRACELLULAR.
-1- TISSUE SPECIFICITY: PLASMA.
-1- TISSUE SPECIFICITY: PLASMA.
-1- SIMILARITY: ALTHOUGH HOMOLOGOUS WITH THE VITAMIN K-DEPENDENT
CLOTTING FACTORS, IT HAS LOST TWO OF THE ESSENTIAL CATALYTIC
RESIDUES AND HAS NO ENZYMATIC ACTIVITY.
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DOMAIN
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PROSITE; PS01186; EGF_2
Plasma; Glycoprotein; C
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MEROPS; S01.979;
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 170
                               1 GGVLVQD
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85.7%;
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EGF-LIKE 1.
EGF-LIKE 2.
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                                                                   Score 34; DB
Pred. No. 17;
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BY SIMILARITY.
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P15464; P15485; P15486; P15487;
P15464; P1590 (Rel. 14, Created)
01-NOV-1995 (Rel. 32, List sequence update)
01-NOV-1997 (Rel. 35, List annotation update)
01-NOV-1997 (Rel. 35, Cist annotation update)
                                                                              STRAIN-PB176;
STRAIN-P90188116; PubMed=2576094;
MEDLINE-90188116; PubMed=2576094;
MEDLINE-90188116; PubMed=2576094;
MEDLINE-90188116; PubMed=2576094;
MEDLINE-90188116; PubMed=2576094;
MEDLINE-90188116; PubMed=2576094;
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                        "Galajakumari M.B., Thomus C.J., Halter R., Manning "Genes for blosynthesis and assembly of CS3 pili or enterotoxigenic Escherichia coli: novel regulation production by bypassing an amber codon."; Mol. Microbiol. 3:1685-1695(1989).
                                                                                                                                                                            SEQUENCE FROM
                                                                                                                                                                                                                       NCBI_TaxID=562;
                                                                                                                                                                                                                                             Escherichia
                                                                                                                                                                                                                                                             Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                      Escherichia coli.
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REPEAT
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01-NOV-1995 (Rel. 32, Last sequence update)
15-JUL-1998 (Rel. 36, Last annotation update)
HYPOTHETICAL 45.0 KDA PROTEIN IN COBA 5'REGION.
SYNECHOCOCCUS SP. (Strain PCC 7942) (Anacystis nidulans R2).
Bacteria; Cyanobacteria; Chroococcales; Synechococcus.
NCBI_TaxID-1140;
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InterPro; IPR001173; -.
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THE BIOGENESIS
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Best Local S
Matches 6
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SEQUENCE FROM N.A.
STRAIN=CV. ALCAN; TISSUE-Leaf;
STRAINE-94143473; Pubmed-8310053;
MEDLINE-94143473; Pubmed-8310053;
Chang M.-M., Culley D.E., Hadwiger
As sequence of a pea (Pis
                    STRAIN=CV. ALCAN; TISSUE=Leaf;
MEDLINE=93081722; PubMed=1450378;
Chang M.-M., Hadwiger L.A.
"Molecular characterization of a pea beta-1,3-glucanase
Fusarium solani and chitosan challenge.";
Plant Mol. Biol. 20:609-618(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1995
01-NOV-1995
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Embryophyta; Trache
Magnoliophyta; eudicotyledons; core eudicots;
Fabales; Fabaceae; Papilionoideae; Pisum.
                                                                                                                                                      SEQUENCE OF 32-370 FROM N.A
                                                                                                                                                                                                    Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                    Pisum sativum (Garden pea).
Eukaryota; Viridiplantae; E
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BETA-GLUCAN EI
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EMBL; X16944; CAA34816.1;
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-!- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. OUTER MEMBRANE (BY SIMILARITY).

-!- ALTERNATIVE PRODUCTS: FIVE PROTEIN ARE PRODUCED BY ALTERNATIVE INITIATION. THE FIFTH PROTEIN REQUIRES THE SUPPRESSION OR READTHROUGH OF AN INTERNAL AMBER CODON IN POSITION 754.

-!- SIMILARITY: BELONGS TO THE FIMBRIAL EXPORT USHER FAMILY.
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      FUNCTION:
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membrane; Transmembrane; Fimbria; Transport; Signal;
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CS3 PILI SYNTHESIS 63
CS3 PILI SYNTHESIS 43
CS3 PILI SYNTHESIS 20
CS3 PILI SYNTHESIS 20
MW; 6C53056EE96277B5 C
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(Pisum
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Pred. No. 41;
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DEFENSE OF PLANTS AGAINST
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                                                                                                                                                                                                                                      beta-1,3-glucanase
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                                  SEQUENCE FROM N.A.
STRAIN-C57BL/6; TISSUE-Brain;
STRAIN-C57BL/6; TISSUE-Brain;
                                                                                                                                                                                                                                                Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                      made by oligo-capping 
Submitted (APR-2000) (
                                                                                                                                                    "Isolation of full-length cDNA clones
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                  SEQUENCE OF 21-396 FROM N.A. MEDLINE-20275619; PubMed-108
                                                                                                                                                                           Hashimoto K.
                                                                                                                                                                                                                                                                                      A2BP1 OR A2BP.
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TISSUE SPECIFICITY: CONSTITUTIVELY EXPRESSED INDUCTION: BY FUNGAL ELICITORS.
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TE; PS00587; GLYCOSYL_HYDROL_F17;
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REMOVED IN MATURE FORM (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (PROBABLE).
NUCLEOPHILE (BY SIMILARITY).
PROTON DONOR (BY SIMILARITY).
N-LINKED (GLCNAC. . .) (POTENTIAL).
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                                                                                                                                                             from mouse brain cDNA library
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'IPAA...
A2BP1 OR A2Br.
Homo sapiens (Human).
Homo sapiens (Homan).
Homo sapiens (Homan).
Homo sapiens (Homan).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O9NWB1; O9NS20;
01-OCT-2000 (Rel. 40, Created)
01-OCT-2000 (Rel. 40, Last sequence up
01-OCT-2000 (Rel. 40, Last annotation
ATAXIN 2-BINDING PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE;
            EMBL;
                                                                   This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                              MEDLINE-20275619; PubMed-10814712;
Shibata H., Huynh D.P., Pulst S.-M.;
Shibata H., Huynh D.P., Pulst S.-M.;
"A novel protein with RNA-binding motifs interacts with ataxin-2.";
"A novel protein with RNA-binding motifs interacts with ataxin-2.";
Hum. Mol. Genet. 9:1303-1313(2000).
                                                                                                                                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; NCBI_TaxID=9606;
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                                        EMBL; AK001027; BAA91472.1;
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                                                                                                                                                                                                   SUBUNIT: BINDS TO THE C-TERMINAL OF ATAXIN-2 TISSUE SPECIFICITY: PREDOMINANTLY EXPRESSED
                                                                                                                                                                                     SIMILARITY: CONTAINS 1 RNA RECOGNITION MOTIF (RRM).
               ; AF107203; AAF78291.1;
605104; -.
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G -> D (IN REF. 2).
R -> RFR (IN REF. 2).
G -> S (IN REF. 2).
G -> S (IN REF. 2).
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EMBL/GenBank/DDBJ
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PS50102;

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CHARACTERIZATION.

RP CHARACTERIZATION.

RC STRAIN=K12 / MG1655;

RC STRAIN=K12 / MG1655;

RX MEDLINE-20223635; PubMe3=10760150;

RX MEDLINE-20223635; PubMe3=10760150;

RA Francetic O., Badaut C., Rimsky S., Pugsley A.P.;

RT The Chia (YheB) protein of Escherichia coli K-12 is an endochitinase rubose gene is negativel; controlled by the nucleoid-structuring rubose gene is negativel; rubose with Lysozyme/CHITINASE ACTIVITY.

CC -1- FUNCTION: BIFUNCTIONAL ENZYME WITH LYSOZYME/CHITINASE ACTIVITY.

CC -1- FUNCTION: BIFUNCTIONAL ENZYME WITH LYSOZYME/CHITINASE ACTIVITY.

CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES OF COLINCAL CC -1- CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES OF COLINCAL COLINCAL COLINCAL COLINCAL COLINCAL COLINCAL COLINCAL COLINCAL C
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01-JAN-1995 (Rel. 32, Last sequence update)
01-WOV-1995 (Rel. 40, Last sendence update)
01-OCT-2000 (Rel. 40, Last annotation update)
PROBABLE BIFUNCTIONAL CHITINASE/LYSOZYME PROCURSOR [INCLUDES:
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Functional analysis of the carbohydrate-binding domains of "Functional analysis of the carbohydrate-binding domains of a continuous continuo
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CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Andrews S.C., Harrison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=89291745; PubMed=2661540;
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MEDLINE-97426617; PubMed-9278503;
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K., Mayhew G.F.
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15-JUL-1998 (Rel. 3
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SEQUENCE
This SWISS-PROT entry between the Swiss Ins
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DOMAIN
                                                                                           TISSUE-Jejunum;
Hill O., Zucht H.D.,
Submitted (FEB-1997)
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DOMAIN
                                                                                                                            SEQUENCE FROM
                                                                                                                                                  NCBI_TaxID=9823;
                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
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EMBL; M27176; AAC13985.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REPRESSED. THE DNA-BINDING PROTEIN H-NS SILENCING OF CHIA.

-1- SIMILARITY: IN THE C-TERMINAL SECTION, II (FAMILY 18 OF GLYCOSYL HYDROLASES).

-1- SIMILARITY: CONTAINS FIVE COPIES OF A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DOMAIN
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                              ... Jucht H.D., Luttermann D., Maegert H.J., Forssmann W.-G.;
mitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.
FUNCTION: ENDOGENOUS ACTIVATOR OF INTESTINAL GUANYLATE CYCLASE.
IT STIMULATES THIS ENZYME THROUGH THE SAME RECEPTOR BINDING REGIO
AS THE HEAT-STABLE ENTEROTOXINS.
SIMILARITY: BELONGS TO THE GUANYLIN FAMILY. ALSO SIMILAR TO HEAT-
STABLE ENTEROTOXINS.
                                                                                                                                                                                                                                                                                                                                                 GGVLVQDG
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ry is copyright. It is production institute of Bioinformatics
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"Isolation of the genes encoding the 51-kilodalton and 28-kilodalton subunits of Crithidia fasciculata replication protein A.";
Mol. Biochem. Parasitol. 63:135-142(1994).
-I. FUNCTION: ABSOLUTELY REQUIRED FOR SIMIAN VIRUS 40 DNA REPLICATION IN VITRO. IT PARTICIPATES IN A VERY EARLY STEP IN INITIATION. RP.
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Eukaryota; Euglenozoa;
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Pfam; PF02058; Guanylin; 1.
PRINTS; PR00774; GUANYLIN.
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                   STRAIN-BRISTOL N2;
MEDLINB-92168156; PubMed-1538779;
Sulston J., Du Z., Thomas K., Wilson R., Hillier L.,
Halloran N., Green P., Thierry-Mieg J., Qiu L., Dear
Craxton M., Durbin R.K., Berks M., Metzstein M., Hawk
Ainscough R., Waterston R.;
"The C. elegans genome sequencing project: a beginnin
Nature 356:37-41(1992).

-!- SIMILARITY: STRONG, TO MAMMALIAN PHENYLETHANOLAMI
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                                                                                                                             SEQUENCE FROM N.A.
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Eukaryota; Metazoa; Nem
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01-FEB-1994
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Eur. J. Blochem. 263:789-796(1999).

-I- FUNCTION: CATALYZES THE TRANSFER OF A METHYL GROUP FROM METHYLCOBALAMIN AND METHYLCOBINAMIDE TO HOMOCYSTEINE RESULTING IN METHYLCOBININE FORMATION.

-I- COFACTOR: ZINC; BINDS ONE MOLE PER SUBUNIT (BY SIMILARITY).

-I- PATHWAX: TERMINAL STEP IN THE DE NOVO BIOSYNTHESIS OF METHIONINE.
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WormPep; B0303.2; CE00536.
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209 GGILIQGG 216
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000 (Rel. 40, Last sequence update)
000 (Rel. 40, Last annotation update)
METHYLCOBALAMIN:HOMOCYSTEINE METHYLTRANSFERASE (EC 2.1.1.-)
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olase (Mch) from Methanobacterium
burg) and functional expression of the
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Matches 5
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Pfam; PF01717; Methionine_synt; 1.
Pransferase; Methyltransferase; Methionine biosynthesis; Zinc.
METAL 201 201 ZINC (BY SIMILARITY).
METAL 203 203 ZINC (BY SIMILARITY).
METAL 285 285 ZINC (BY SIMILARITY).
METAL 285 285 ZINC (BY SIMILARITY).
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Search completed: June 13, 2001, 14:21:47 Job time: 807 sec

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Result
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1: sp_archea:*
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C STRAIN-CV NIPPONBARE;

A Sasaki T., Matsumoto T., Yamamoto K.;

A Casaki T., Matsumoto T., Yamamoto K.;

A Coryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Oryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Oryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Oryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Interponomic DNA, Chromosome 8, PA

"Interponomic DNA, DDBJ databases.

"Interponomic DNA, Chromosome 8, PA

"Oryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Interponomic DNA, Chromosome 8, PA

"Oryza sativa nipponbare(GA3) genomic DNA, Chromosome 8, PA

"Oryza sativ
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Q9XE26;
Q1-NOV-1999 (TrEMBLrel. 12, Created)
Q1-NOV-1999 (TrEMBLrel. 12, Last sequence update)
Q1-JUN-2000 (TrEMBLrel. 14, Last annotation update)
HYPOTHETICAL 170.8 KDA PROTEIN.
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1035 GGVLMQDG 1042
Q9ZS84
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PRELIMINARY;
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PRT;
1542 AA.
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005459;
01-JUL-1997 (TrembLrel. 0.
01-JUL-1997 (TrembLrel. 0.
01-JUN-2000 (TrembLrel. 1.
HYPOTHETICAL 57.7 KDA PRO
RV3885C OR MTCY15F10.27.
STRAIN-H37RY;
STRAIN-H37RY;
STRAIN-H37RY;
MEDLINE-98295987; PubMed-9634230;
Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglmeier X., Gas S., Barry C.E. III, Tekaia F., Badcock K., Basham D., 3rown D., Chillingworth T., Connor R., Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., 19ail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Sqares R., Sulston Rutter S., Seeger K., Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. STRAIN-H37RV;
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01-MAY-1999;
01-MAY-1999;
01-OCT-2000;
POLYPROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  multiple loci on the skort arm of tomato chron Mol. Plant Microbe Interact. 12:93-102(1999).
EMBL; AFI19040; AAD133(4.1; -.
INTERRO; IPR000477; -.
INTERPRO; IPR000953; -.
INTERPRO; IPR001954; -.
INTERPRO; IPR001969; -.
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Parniske M., Jones J.D.G.;
"Recombination between diverged clusters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mycobacterium tuberculosis.
Bacteria; Firmicutes; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF00078; rvt; 1.
PFAM; PF00665; rve; 1.
PROSITE; PS00141; ASP_FROTEASE;
PROSITE; PS50013; CHROMO_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Actinomycetales; Corynebacterineae;
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MEDLINE-99125234; PubMed-9926411;
Parniske M., Wulff B.B., Bonnema
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Homologues of the Cf-9 disease resistance gene (Homatic Chromosome multiple loci on the short arm of tomato chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Magnollophyta; eudototy-dedons; core eudicots; Asteridae; euasterids
Solanales; Solanaceae; Solanum.
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Nature 393:537-544(1998).
EMBL; 294121; CAB08089.1; -
TUBERCULIST; RV3885C; -
Hypothetical protein.
SEQUENCE 537 AA; 57656 MW;
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PROSITE; PS0021:
ATP-binding.
SEQUENCE 606;
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01-MAY-2000 (Trem
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ABC TRANSPORTER,
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PFAM; PF00664; ABC_membrane; 1.

PROSITE; PS00211; ABC_TRANSPORTER; 1.

PROSITE; PS00216; SUGAR_TRANSPORT_1;
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Bacteria; Thermus/Deinococcus
NCBI_TaxID=1299;
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PROBABLE REPLICATION PROTEIN A
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Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen I
Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;
"2.2 Mb of contiguous nucleotide sequence from chromosome III of C.
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                                                                                                                                                   Murphy L., Quail M., Harris Submitted (JUL-2000) to the EMBL; AL160371; CAC00408.1;
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STRAIN-BRISTOL N2;
MEDLINE-94150718; PubMed-7906398;
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H11E01.3.
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Eukaryota; Euglenozoa;
NCBI_TaxID=5664;
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Submitted (MAY-1998)
EMBL; AF067222; AAC1;
SEQUENCE 1510 AA;
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Gelsel C., Wamsley P
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                                                                                                                                                                                                              SEQUENCE FROM N.A. STRAIN-FRIEDLIN;
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STRAIN-BRISTOL N2;
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Rhabditidae; Peloder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Caenorhabditis elegans.
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inae; Caenorhabditis.
                   82.9%;
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1; Mismatches
Score 34; DB pred. No. 48; O; Mismatches
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EMBL/GenBank/DDBJ
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Last annotation update)
N A 28 KDA SUBUNIT (FRAGMENT)
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databases.
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RESULT
004927
Query Match
Best Local S
Matches 5
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Best Local S
Matches 6
                                                                           Manabe T., Saito K.;
Submitted (MAY-1977) to the EMBL/Gen
-: CATALVIIC ACTIVITY: AN S-ALKYL-L
SULFENATE + 2 AMINOCRYLATE.
-: COFACTOR: PYRIDOXAL-PHOSPHATE.
EMBL, AB004269; BAA20358.1; -
MENDEL; 16931; Alltu;1125;16931.
INTERPRO; IPRO00561; -.
PROSITE; PS00022; EGF1; UNKNOWN_1.
PRODOM; PD014435; -; 1.
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01-OCT-2000
33 KDA PROTE
                                                        Lyase.
SEQUENCE
                                                                                                                                                                                                                                                    004927;
01-JUL-1997 (TrEMBLrel. 04, Created)
01-JUL-1997 (TrEMBLrel. 04, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
ALLIINASE (EC 4.4.1.4) (ALLIIN LYASE) (CYSTEINE SULPHOXIDE LYASE).
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P97157;
                                                                                                                                                                                                                         Eukaryota; Viridiplantae; Embryophyta; 'Magnoliophyta; Liliopsida; Asparagales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    by bypassing an amber codon.";
Mol. Microbiol. 3:1685-1695(1989).
EMBL; X16944; CAA34818.1; -.
INTERPRO; IPROU0015; -.
PFAM; PF00577; Usher; 1.
                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                               Allium tuberosum.
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                                                                                                                                                                                                               NCBI_TaxID=4683;
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          82.9%;
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TY: AN S-ALKYL-L-CYSTEINE S-OXIDE -
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assembly of CS:
coli: novel re
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Last annotation update)
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Pred.
          Score 34;
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          1e+02;
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                       DB 10;
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                                          Query Match
Best Local S
Matches 7
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Best Local S
Matches 7
                                                                                     Nakamura Y.;
"Structural Analysis of Arabidopsis thaliana Chromosome 3.
Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AP002043; BAB02613.1; -
SEQUENCE 1241 AA; 137111 MW; DD3367D1E7F07D28 CRC64;
                                                                                                                                                                                                      Eukaryota; Viridiplantae; Embryophyta; Trache Magnoliophyta; eudicotyledons; core eudicots; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                           01-0CT-2000 (TrEMBLrel. 15, Created)
01-0CT-2000 (TrEMBLrel. 15, Last sequence update)
01-0CT-2000 (TrEMBLrel. 15, Last annotation update)
P-GLYCOPROTEIN, MULTI-CRUG RESISTANCE RELATED, ABC TRANSPORTER-LIKE
                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN-COLUMBIA;
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NON_TER
SEQUENCE
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                                                                                                                                                                                                                                       Arabidopsis thaliana (Mouse-ear cress).
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01-AUG-1998 (TrEMBLrel. 07, Last see
01-NOV-1998 (TrEMBLrel. 08, Last an
NITROUS OXIDE REDUCTAS)E (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scala D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-98258028; PubMed-9595664;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uncultured eubacterium S321195C.
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GGVLVQKG 931
                     GGVLVQDG 8
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                                           Similarity 87.17; Conservative
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AAC38341.1;
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Pred. No. 1.2e+02;
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No.
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                                                    .1e+02;
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            AX MEDLINE-98295987; PubMed-9634230;
Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris D.
Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekaia F.,
La Badcock K., Basham D., Brown D., Chillingworth T., Connor R.,
La Badcock K., Basham D., Brown D., Chillingworth T., Connor R.,
La Badcock K., Basham D., Brown D., Chillingworth T., Connor R.,
La Davies R., Devlin K., Feltwell T., Gentles S., Murphy L.,
La Davies R., Daylin K., Feltwell T., Gentles S., Murphy L.,
La Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L.,
La Cliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J.,
La Rutter S., Seeger K., Skelton S., Squares S., Sqares R., Sulston J.E.
La Taylor K., Whitehead S., Barrell B.G.,
"Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.";
La La Camplete genome sequence.";
La Tuberculist, Ry3853; -.
TUBERCULIST, Ry3853; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 6
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SEQUENCE FROM N.A.

STRAIN=IR36; TRANSPOSON=GYPSY-TYPE RETROTRANSPOSON RIRE7;
STRAIN=IR36; TRANSPOSON FIRE7; Ohtsubo H.;

"Novel gypsy-type retrotransposon RIRE7: insertion sequence int
tandem repeat sequence TrsD which localized in pelicentromeric
tandem repeat sequence TrsD which localized in pelicentromeric
tandem repeat sequence TrsD which localized in pelicentromeric
hararochromatin region in rice.";
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01-MAY-2000
01-OCT-2000
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MEDLINE-98295987;
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P96224;

01-MAY-1997 (TIEMBLIEL. 03, Created)

01-MAY-1997 (TIEMBLIEL. 03, Last sequence update)

01-JUN-2000 (TIEMBLIEL. 14, Last annotation update)

HYPOTHETICAL 16.2 KDA PROTEIN.

RV3853 OR MTCY01A6.15C.
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Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Bactinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.
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Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases
EMBL; AB033235; BAA89466.1;
INTERPRO; IPR001477;
INTERPRO; IPR001584;
INTERPRO; IPR001878;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=1773;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota;
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Viridiplantae; I
Yta; Liliopsida;
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(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 15, Last annotation update)
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4.2e+02;
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Best Local S
Matches 7
                                                                                   P94955;
P94955;
P94955;
P1-MAY-1997 (TrEMBLrel. 03, Created)
P1-MAY-1997 (TrEMBLrel. 03, Last sequence update)
P1-CCT-2000 (TrEMBLrel. 15, Last annotation update)
P1-CT-2000 (TrEMBLREL 15, Last annotation update)
P1-CT-2000 (TrEMBLREL 15, Last annotation update)
P1-CCT-2000 (TrEMBLREL 15, Last sequence update)
P1-CCT-
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PFAM; PF00325; crp; 1.
PRINTS; PR00034; HTHCRP.
PROSITE; PS50042; CNMP_BINDING_3; 1.
SEQUENCE 213 AA; 23266 MW; A8200332A7C252D7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-20036896; PubMed-10567266; Mickey E.K., Peterson J.D., White O., Elsen J.A., Heidelberg J.F., Hickey E.K., Peterson D.L., Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L., Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Vamathevan J.J., Lam P., McDonald L., Utterback T., Zalewski C., Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D. Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C., Fraser C.M.;
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TIGR; DR0834; -.
INTERPRO; IPR000595; -.
INTERPRO; IPR001808; -.
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01-MAY-2000 (TIEMBLIFEL 13, L
01-JUN-2000 (TIEMBLIFEL 14, L
NITROGEN REGULATOR, PUTATIVE.
                     Micrococcus luteus (Micrococcus lysodeikticus).
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             radiodurans R1.";
Science 286:1571-1577(1999).
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NCBI_TaxID=1299;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deinococcus radiodurans.
Bacteria; Thermus/Deinoc
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                                                                       ATP H.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
SIMILAR TO MADS-BOX PROTEIN AGL14.
                                                                                                                                                                                             PFAM; PF00319; SRF-TF; 1.
PRINTS; PR00404; MADSDOMAIN.
PROSITE; PS50066; MADS_BOX_2;
SEQUENCE 288 AA; 30675 MW;
                                                                                                                                                                                                                                                                                                                                                                              STRAIN-CV. NIPPONBARE;
Sasaki T., Matsumoto T., Yaman
"Oryza sativa nipponbare(GA3)
clone:P0514G12.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Oryza sativa (Rice).
Eukaryota; Viridiplantae; |
Magnoliophyta; Liliopsida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grueber G., Dose K., Nawroth T., Diel P., Cattaruzza M., Submitted (FEB-1995) to the EMBL/GenBank/DBJ databases.
-I- CATALYTIC ACTIVITY: ATP + H(2)0 - ADP + PHOSPHATE.
EMBL; X84791; CAAS9262.1; -.
                                                                                                                                                                                                                                                                                                                                    Submitted (OCT-1999) to the EMBL; AP000616; BAA85428.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INTERPRO; IPRO00711; PFAM; PF00213; OSCP; PRINTS; PR00125; ATPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. STRAIN-ATCC 4698;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=1270; [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=4530;
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                                                                                                                                                                                                                                                                                                           ISSP; P11746; 1MNM
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  GGVVVNDG
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7; Conserv
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                                                                                        Conservative
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OSCP; 1.
5; ATPASEDELTA.
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                                                                                      Score 33; DB Pred. No. 90; 1; Mismatches
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Pred. No. 65;
0; Mismatches
                                                                                        1;
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88919F5DB8A96623 CRC64;
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genomic DNA,
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
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Gapop 10.0 ,
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/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
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/cgn2_6/ptodata/2/1aa/backfiles1.pep:*
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US-07-903-029-4
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US-08-093-372-4
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US-08-145-809A-125
US-08-741-63-3
US-07-903-029-6
US-08-448-199-16
US-08-448-508-116
US-08-448-508-16
US-08-448-199-16
US-08-448-197-38
PCT-US93-10555-38
US-08-04-28-197-38
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  Sequence
108 App
16 Appl
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2 Appl
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4 Appl
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4 Appl
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4 Appl
                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 115 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-903-029-4
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APPLICANT: WILL

APPLICANT: CUITIE, MBIL

APPLICANT: Fok, Kam F.

ITILE OF INVENTION: Human Guanylin

NUMBER OF SEQUENCES: 6

CORRESPONDENCE ADDRESS:

ADDRESSEE: Dennis A. Bennett, Monsanto Co., A35

STRRET: 800 N. Lindbergh Blvd.
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Matches 7
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/07/903
FILING DATE: 1920623
CLASSIFICATION: 930
ATTORNEY/AGENT INFORMATION:
NAME: Bennett, Dennis A.
REGISTRATION NUMBER: 34,547
REFERENCE/DOCKET NUMBER: 07-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (314,694-5402
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                           20
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                                                 GGVLVQDG 8
                      GGVTVQDG
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US-08-749-699-2
US-08-749-699-5
US-08-1749-699-5
US-08-159-339A-295
US-08-414-4178-32
US-08-446-348A-32
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US-08-421-356-3
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Pred. No. 6.5;
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Result

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Score

Query Match

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Minimum DB Maximum DB

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Title: Perfect score:

protein -

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Scoring table: Sequence:

RESULT 2 US-07-903-029-5

Application US/07903029

GENERAL INFORMATION:

Wiegand,

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Best Local Similarity
Thehes 7; Conserv
                                                                                                                                                                                                                                                               Sequence 4, Application US/08859931A Patent No. 5945510 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                               -08-859-931A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (314)694-9309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                             NUMBER OF SEQUENCES: SCORRESPONDENCE ADDRESS:
                                                                                                                                                                                               TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: peptide -903-029-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 115 amino acids
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Bennett, Dennis A.
REGISTRATION NUMBER: 34,547
REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                   PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Currie, Mar
APPLICANT: Fok, Kam F'
TITLE OF INVENTION: E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                 CITY: Washington, D.C. STATE: D.C.
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   OPERATING SYSTEM:
                                                                                  COUNTRY:
                                                                                                                                  STREET:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US FILING DATE: 19920623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: St. Louis
STATE: Missouri
                                                                                                                                                 DDRESSEE:
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                                                                 20037
                                                                                                                             E: SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W., Suite 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E: Dennis A. Bennett, Monsanto Co., A3SG
800 N. Lindbergh Blvd.
                                                                                U.S.A.
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(314)694-9309
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PC-DOS/MS-DOS
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                                                                                                                                                                                            SUBSTANTIALLY PURE ZONULIN, PHYSIOLOGICAL MODULATOR OF MAMMALIAN TIGHT JUNCTIONS
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6.5;
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; MOLECULE TYPE: US-08-093-372-4
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                                                                                                       COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/093,372
FILING DATE: 16-JUL-1993
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Reiter, Stephen E.
REGISTRATION NUMBER: 31,192
REGISTRATION NUMBER: 941 9391
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-546-4737
TELEPHONE: 619-546-9392
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Best Local Similarity
Matches 7; Conserv
                                                                        TELEFAX: 619-546-9392
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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TELEFAX: (2)
INFORMATION FOR:
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                                                                                                                                                                                                                                                                                                                                        COUNTRY: U.S.A.
ZIP: 90071-2921
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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REFERENCE/DOCKET NUMBER: A-
TELECOMMUNICATION INFORMATION:
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HYPOTHETICAL:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: TRANSGENIC PLANTS CONTAINING MULTIPLE OF INVENTION: DISEASE RESISTANCE GENES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn ReCURRENT APPLICATION DATA
                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Los Angeles
                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET:
                                                            LENGTH:
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                                                            368 amino acids
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Zhu, Qun
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Dixon, Richard A
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87.5%;
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Pred. No.
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US-08-741-327E-11
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Best Local Similarity
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Best Local
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                                                                                                   GENERAL INFORMATION:
APPLICANT: Honjo, Tasuku
APPLICANT: Hasuda, Fumihiko
APPLICANT: Matsuda, Fumihiko
TITLE OF INVENTION: HUMAN IMMUNOGLOBULIN VH GENE
TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION UMBER: US/08/741
FILING DATE: October 28, 1996
CLASSIFICATION: Q total
ATTORNEY/AGENT INFORMATION:
NAME: G. Kenneth Smith
REGISTRATION NUMBER: 47,135
REFERENCE/DOCKET NUMBER: 9770
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-913-0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                             quence 125, Application US/08545809A itent No. 6096878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC COMPAI
OPERATING SYSTEM: PC-DO
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 1
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                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                        137
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CITY: Chicago
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         312-913-9808
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IBM PC compatible SYSTEM: PC-DOS/MS-DOS
Fish & Richardson, P.C. 5 Franklin Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Riboflavin mutants as vaccines against Actinobacillus pleuropneumoniae 17
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75.0%;
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er 28, 1996
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Pred. No.
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Pred. No.
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1.3e+02;
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78;
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Best Local Similarity
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                                                 CLASSIFICATION:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: Washington STATE: D.C.
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27 GGVVVQPG 34
                                                                                                                                 CLASSIFICATION:
                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 24-SEP
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TELEFAX: 617-542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA: COMPUTER READABLE FORM: MEDIUM TYPE: Diskette TELECOMMUNICATION INFORMATION: TELEPHONE: 617-542-5070 FILING DATE: 10-MAY-1993 ATTORNEY/AGENT INFORMATION: PRIOR APPLICATION DATA:
APPLICATION NUMBER: TELEPHONE: 617-542-8906 APPLICATION NUMBER: US/08 FILING DATE: 27-MAR-1996 REFERENCE/DOCKET NUMBER: NAME: Freeman, John W REGISTRATION NUMBER: : 118 amino acids IBM Compatible protein PCT/JP93/00603 US/08/545,809A 29,066 125: 06501/004001 Length 118;

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JULT 7

108-716-301-6

108-716-301-6

25equence 6, Application US/08716301

3atent No. 5821090

GENERAL INFORMATION:

APPLICANT: Serna, Maria Jose Buitiago
APPLICANT: Gareiss, Maria Angeles
TITLE OF INVENTION: Riboflavin biosynthesis in fungi
NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:
ADDRESSEE: Keil & Weinkauf
STREET: 101 Connecticut Avenue
CITY: Washington
STREET: D.C.

COUNTRY: USA
21P: 2036
COUNTRY: USA
21P: 2036
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb storage
COMPUTER: LBM compatible
OPERATING SYSTEM: MS-DOS version 7.0
SOFTWARE: Wordperfect version 5.1
CURRENT APPLICATION: USA
APPLICATION: USA
CLASSIFICATION: C 12 N 15/53
CLASSIFICATION: C 12 N 15/54
CLASSIFICATION: C 12 N 15/51

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      Matches
                      Query Match
Best Local :
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Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 346 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                             TOPOLOGY: linear IMMEDIATE SOURCE: LIBRARY: GenBank CLONE: 473772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 15-MAF,-19
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: DDS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/774,169
FILING DATE: Herewith
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Diskette
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LENGTH: 212 amino acid:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
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    Local Similarity
nes '5; Conserv
                                                                                                                                                      TYPE: amino acid
STRANDEDNESS: si
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                                                                                                                                                                                                                                                     TELEFAX: 415-845-4166
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CITY: Palo Alto
                                                                                                                                                                                                                                                                                                            NAME: Billings, Lucy J. REGISTRATION NUMBER: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
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                   75.68;
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75.0%;
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                 Score 31; DB 1;
Pred. No. 1.7e+02;
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Pred. No. 1e+02;
 Mismatches
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 1; Indels
                              Length 346;
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US-07-903-029-6
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Best Local Similarity 85.,
6; Conservative
                                                                                                                                                                                                  Sequence 108,
                                                                                                                                                        Sequence 108, Application US/08545809A
Patent No. 6096878
GENERAL INFORMATION:
APPLICANT: Honjo, Tasuku
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                    CORRESPONDENCE ADDRESS
                                                                                                           TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                                                                                                                     APPLICANT: Honjo, Tasuku
APPLICANT: Matsuda, Fumihiko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (314)694-5402
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
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                                                                                                    NUMBER OF SEQUENCES:
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CORRESPONDENCE ADDRESS:
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APPLICANT: Fok, Ka
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COUNTRY: US
                                              TYPE: !
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                                   STATE:
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REGISTRATION NUMBER: 34,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: UPPLICATION NUMBER: UPPLICATION: 530
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 115 amino acids
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                                                                       Fish & Richardson, P.C.
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85.7%;
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Pred. No.
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COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette

OPERATING SYSTEM:

IBM Compatible

Windows95

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Best Local Similarity /5.0
Best Cocal Similarity /5.0
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APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
             TELEFAX: (510) 655-3542
INFORMATION FOR SEQ ID NO: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEX: 200154
INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                  REFERENCE/DOCKET NUMBER: 08
TELECOMMUNICATION INFORMATION:
TELEPHONE: (510) 601-2585
                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
REGISTRATION NUMBER: 36,914
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PRIOR APPLICATION NUMBER: PCT/JP93/00603
APPLICATION NUMBER: PCT/JP93/00603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Freeman, John W.
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: CHIRON CORPORATION
STREET: INTELLECTUAL PROPERTY R440 - P.O. BOX 8097
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TOPOLOGY: linear
MOLECULE TYPE: protein
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                                                                                                                                                           APPLICATION NUMBER: US/08/475,000 FILING DATE: 07-JUN-1995 CLASSIFICATION: 424
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94662-8097
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                                 655-3542
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75.0%;
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Pred. No.
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                                                                                                          US-08-484-508-16
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                                                                          Sequence 16, Application US/08484508 Patent No. 5948647
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Best Local Similarity
Matches 6; Conser
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              GENERAL INFORMATION:
APPLICANT: RING, DATITLE OF INVENTION:
TITLE OF INVENTION:
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INFORMATION FOR SEQ ID NO:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: CHIRON CORPORATION
STREET: INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (510) 601-2585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION: NAME: SAVEREIDE, PAUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                         LENGTH: 119 amino TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/483,199 FILING DATE: 07-JUN-1995 CLASSIFICATION: 424
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les 6; Conserv
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                                             RING, DAVID B.
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75.0%;
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ANTIGEN-BINDING SITES OF ANTIBODY MOLECULES SPECIFIC FOR CANCER ANTIGENS 18
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Pred. No.
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Pred. No. 83;
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 5891438
GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO: 16:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                         CLASSIFICATION:
CLASSIFICATION:
PRIOR APPLICATION DATA:
PCT/US93/10555
                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPBRATING SYSTEM: PC:-DOS/MS-DOS
SOFTWARE: PatentIn Felease #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/
FILING DATE: 29-OCT-1993
ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,508
                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: SAVEREIDE, PAUL
REGISTION NUMBER: 36,914
REFERENCETOON ET NUMBER: 08
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                           ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East - Suite 500
CITY: Los Angeles
STATE: California
                                                                                              FILING DATE:
                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                              COUNTRY: U
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CLASSIFICATION: 536
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INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
                                                                                                                                                                                                                                                                                                                                                                                                 SILVERMAN, GREGG J.

VENTION: METHOD FOR STIMULATING PRODUCTION OF

VENTION: VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH

VENTION: VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
                                                                                                                                                                                                                                                              USA
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75.08;
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PCT-US93-10555-38
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-428-197-38
                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 455-5100
TELEFAX: (619) 455-5110
INFORMATION FOR SEQ ID NO: 38:
SEQUENCE CHARACTERISTICS:
LENGTH: 123 amino acids
                                                            Matches
                                                                             Query Match
Best Local
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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CTATE: California
                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East - Suite 500
                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                            Local Similarity
les 6; Conserv
                                                                                                                                                                                                                                                                                            NAME: Howells, Stacy L.
REGISTRATION NUMBER: 34,842
REFERENCE/DOCKET NUMBER: FD
                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: PCT/
FILING DATE: • 29-OCT-1993
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                      TOPOLOGY: linear
                                                                                                                                                                                        TYPE:
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                             1 GGVLVQDG 8
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GGTLVQPG 15
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                                                            Conservative
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VENTION: METHOD FOR STIMULATING PRODUCTION OF VENTION: VARIABLE REGION GENE FAMILY RESTRICTED VENTION: VACCINATION WITH A B-CELL SUPERANTIGEN
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                                                                        Score 30;
Pred. No.
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Search completed: June 13, 2001, 14:16:36 Job time: 497 sec

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Human neuro-growth
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Human Zneul EGF-li
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Y41770 Y41770 Y41771 W88381 B44325 B44325 B44326 B44326 B44673 B18674 B18675 B24043 B240444 B01376 Y41885 Y41885 Y44845 W88726 B24397 Y448221 B44241 B41644 B01376 Y13345 Y1345 Y1	770 771 771 771 771 771 771 771	21	20	21	21	21	21	21	21	20	22	21	21	21	20	20	21	21	20	21	21	21	21	21	21	21	21	21	21	21	20	20	20	20	17
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## ALIGNMENTS

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RESULT
Y79121
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                                                                                03-AUG-1998;
                                                                                                                                              WO200007609-A1.
                                                                                                                                                                                                                                                                                   05-JUN-2000
                                                                                                                                                                                                                                                                                                       Y79121;
                                                                                                    28-JUL-1999;
                                                                                                                         17-FEB-2000
                                                                                                                                                                   Synthetic.
                                                           (UYMA-) UNIV MARYLAND BALTIMORE
                                                                                                                                                                                                                                                              Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                          Y79121 standard; Peptide; 8 AA.
                                                                                                                                                                                                                                                                                   (first entry)
                                                                               98US-0127815
                                                                                                    99WO-US16683
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New peptide antagonist of zonulin useful as antiinflammatory agent for

WPI; 2000-205565/18

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RESULT
Y79117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 which bind to a zonula occludens toxin (207) receptor, yet do not complysiologically modulate the opening of mammalian tight junctions CC (TJ), The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor CC binding. They can be prepared by chemical synthesis or by use of CC antiinflammatory agents in the treatment of gastrointestinal CC inflammation, where they bind to the ZOT receptor in the intestine CC inflammation, where they bind to the ZOT receptor in the intestine CC inflammation, where they bind to the ZOT receptor in the intestine CC inflammation on this strointestinal inflammation conditions give rise to CC increased intestinal permeability and the peptide is useful for CC increased intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, c.g. conditions that cause protein losing enteropathy CC caused by infection, e.g. Clostridium difficile infection, c.g. congenital satisfication; parasite infestition, bacterial overgrowth, whipple's disease, diseases with collagenous colitis, inflammatory bowel disease, diseases marked by Lymphatic obstruction, e.g. congenital intestinal lymphangiactasia, correction of congenital heart disease with Fontan's operation, collagenous aldiseases withmost ulceration, e.g. Menetrier's disease, e.g. e.g. systemic lupus erythematosus or food allergies, primarily to calle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
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                                                                                                                                                           W0200007609-A1
                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                   antibacterial; cytostatic; anti-HIV; vurnerary hypotensive; immunosuppressive; antiparasitic;
              (UYMA-) UNIV MARYLAND BALTIMORE
                                                  03-AUG-1998;
                                                                                    28-JUL-1999;
                                                                                                                       17-FEB-2000
                                                                                                                                                                                                                                                    Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-2000
                                                                                                                                                                                                                              gastrointestinal inflammation;
                                                                                                                                                                                                                                                                                                                                                    Peptide antagonist of zonulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y79117 standard; Peptide; 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treating cerebral ischemia, stroke, cerebral edema, gastritis, shigeliosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
les 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GGLCVQPG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                98US-0127815
                                                                                    99WO-US16683
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 47;
Pred. No.
                                                                                                                                                                                                                            therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   red. No. 3.2e+05;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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Length 8;

0,

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CC (PI): The peptide antagonists are based on a common motif of 207 CC and human zonulins, which is believed to be critical for receptor to binding. They can be prepared by chemical synthesis or by use of crecombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal confilmantion, where they bind to the 207 receptor in the intestine cand yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for caused by infection, e.g. Clostridium difficile infection, caused by infection, e.g. Clostridium difficile infection, e.g. clostridium difficile infection, cancesal erosion or ulcerations, e.g. gastrifis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastrifis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, correction of congenital heart disease with Fontan's operation, mucosal disease, without ulceration, e.g. Menetries's disease, e.g. systemic lupus erythematosus or food allergies, primarily to milk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do physiologically modulate the opening of mammalian tight (TJ). The peptide antagening of mammalian
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 45; 69pp; English.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                Zneu-1; neuro-growth factor-like protein; human; breast cancer; glioblastoma; pituitary adenoma; Alzheimer's disease; therapy; nerve regeneration; haematopoiesis; fertility; contraception; antibody; epidermal growth factor; EGF.
    18-JUN-1997;
                                                                            18-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human Zneul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W88384;
                                                                                                                                                        23-DEC-1998
                                                                                                                                                                                                                                WO9857983-A2
                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W88384 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EGF-like domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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97US-0878322
                                                                        98WO-US12763
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         93.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 44;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 7; Conser
                       Whitmore
                                                                                                                                                                                                                                  Zneu-1; neuro-growth factor-like protein; human; breast cancer; glioblastoma; pituitary adenoma; Alzheimer's disease; therapy; nerve regeneration; haematopolesis; fertility; contraception;
WPI; 1999-095324/08.
                                                                                                                       18-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                               W88389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                   18-JUN-1997;
18-JUN-1997;
                                                                                                                                                                         WO9857983-A2
                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                      Human Zneul
                                                                                                                                                                                                                                                                                                              26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnostic assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New mammalian Zneul polypeptides - used to, e.g. treat Alzheimer's disease, cancer and to repopulate blood cells
                                                                                                                                                23-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-095324/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-1997;
                                                          (ZYMO ) ZYMOGENETICS INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GGLCVQPG B
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                                                                                                                                                                                                                                                                                                                                                              standard;
                        TE,
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                                                                                                                                                                                                                                                                                    partial polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                            (first entry)
                                    Jelinek LJ,
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                                                                                   97US-0878322
97US-0050143
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                                                                                                                       98WO-US12763
                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87.2%;
87.5%;
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                                    Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 41; DB Pred. No. 2.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                   Sheppard
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Best Local S
Matches 7
                                                             31-MAR-1999;
02-APR-1999;
05-APR-1999;
30-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant; immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antiinflammatory; hypotensive; dermatological; immunosuppressive; antiinflammatory; antiviral; antibacterial; antifungal; antifungal; antirheumatic; antithyroid; antianaemic; gene therapy; cancer; proliferative disorder; hypottension: neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 heart, spleen, testis, thyroid and lymph nodes. Zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alzheimer's disease, cancer, to repopulate blood cells after chemotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to regenerate nerves. Claimed Zneul polypeptides (see also W88382-97), including specific domains of Zneul and epitope-bearing portions of Zneul, can be used to raise specific antibodies for use e.g. in
                                                                                                                                                                                                                   31-MAR-2000; 2000WO-US08621
                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobhnuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human ORFX ORF1482 polypeptide sequence SEQ ID NO:2964.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This claimed polypeptide comprises amino acid residues 105-177 of the human Zneul mature protein (see W88382), i.e. the 2 epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New mammalian Zneul disease, cancer and
(CURA-) CURAGEN CORP
                                                                                                                                                                                                                                                                                05-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      thrombosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B41718 standard; Protein; 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diagnostic assays.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
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                                                          ; 99US-0127607.
; 99US-0127636.
; 99US-0127728.
; 2000US-0540763.
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87.5%;
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Pred. No. 5.8;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to, e.g. treat Alzheimer's cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypertension;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zneul is
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cardiant;
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Query Match
Best Local Similarity
""+"hes 7; Conserv.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CC C74446 to C77606 encode the proteins given in B40237 to B43397, which CC represent the human ORFX open reading frames I to 3161. The ORFX CG sequences have activities such as: cytostatic; hepatotropic; vulnerary; CC antipsoriatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; CC anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; CC cardiant; thrombolytic; cosquiant; vasotropic; antidiabetic; hypotensive; CC dermatological; immunosuppressive; antiinflammatory; antibacterial; CC antiviral; antifungal; antirheumatic; antihlyroid; and antianaemic. The CC sequences can be used for determining the presence of or predisposition CC ORFX-associated disorder. The nucleic acids can be used to express ORFX CC used to treat cancers, proliferative disorders, neurodegenerative CC used to treat cancers, proliferative disorders, neurodegenerative CC disorders, osteoarthritis, graft vs host disease, cardiovascular disease, CC (Acabetes mellitus, hyportension, hypothyroidism, cholesterol ester CC (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune CC (artilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                   hypotensive; dermatological; immunosuppressive; artifufilammatory, antifurial; antifugal; antifugal; antifupal; antifupal
                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                  Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human ORFX ORF1402 polypeptide sequence SEQ ID NO:2804.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B41638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                B41638 standard; Protein; 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 2200; 5507pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shimkets RA,
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19 99scvqpg 26
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                                                                                                                contraceptive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 41; DB Pred. No. 8.5; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 21; Length 115;
3.5;
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                                                                                                                                                                                                                                                                                                                           hypertension;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     cardiant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 7
                                                                                Zneu-1; neuro-growth factor-like protein; human; breast cancer glioblastoma; pituitary adenoma; Alzheimer's disease; therapy; nerve regeneration; haematopolesis; fertility; contraception;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31-MAR-1999;
02-APR-1999;
05-APR-1999;
30-MAR-2000;
                                                                                                                                                                             Human Zneul partial polypeptide.
                                                                                                                                                                                                                                                                                                                         W88388 standard;
                                                                                                                                                                                                                                 26-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C74446 to C77606 encode the proteins given in B40237 to B43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enhance coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 11; Page 2044; 5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel nucleic acids and peptides derived from open reading frame useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2000-602362/57.
N-PSDB; C75847.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                              91
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                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                            ggscvqpg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       153
                                                                                                                                                                                                                                 (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000US-0540763
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99US-0127728
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                                                                                                                                                                                                                                                                                                                         Protein; 158 AA
                                                                                                                                                                                                                              entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 41; DB
Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 153;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
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Homo sapiens

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RESULT
W88390
В
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This claimed polypeptide comprises amino acid residues 1-158 of the human zneul mature protein (see w88382), i.e. the first HSMHC395A homology domain and first EGF-like domain of Zneul zneul is a new neuro-growth factor-like protein that can be used as a growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. Zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alzheimer's disease, cancer, to renowlate blood cells after champthers of the strength of the
                                                                                                                                                                                                                                           Zneu-1; neuro-growth factor-like protein; human; breast
glioblastoma; pituitary adenoma; Alzheimer's disease; the
nerve regeneration; haematopolesis; fertility; contraces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W88390 standard; Protein; 169 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repopulate blood cells after chemotherapy, to stimulate myofibroblast proliferation, stimulate or inhibit growth factors made in the placenta, in fertility and contraception, or to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-095324/08
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Whitmore TE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUN-1997;
18-JUN-1997;
18-JUN-1997;
                                          18-JUN-1998;
                                                                                       23-DEC-1998
                                                                                                                                     W09857983-A2
                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                             antibody.
                                                                                                                                                                                                                                                                                                                                       Human Zneul partial polypeptide
                                                                                                                                                                                                                                                                                                                                                                                     26-APR-1999 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnostic assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New mammalian Zneul polypeptides - used disease, cancer and to repopulate blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-JUN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               regenerate nerves.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W09857983-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ncluding specific neul, can be used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
nes 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GGLCVQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ggscvqpg 102
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jelinek LJ,
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97US-0050143
97US-0878322
                                          98WO-US12763
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claimed Zneul polypeptides (see also W88382-97), domains of Zneul and epitope-bearing portions of to raise specific antibodies for use e.g. in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    core 41; DB red. No. 11; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treat Alzheimer's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                             cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
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RESULT
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Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       factor-like protein that can be used as a growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. Zneul may also play a role in breast cancer, glioblastomas, and pituitary adenomas. Zneul can be used to treat Alxheimer's disease, cancer, to repopulate blood cells after chemotherapy, to stimulate myofilproblast proliferation, stimulate or inhibit growth factors made in the placenta, in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      fertility and contraception, or to regenerate nerves. Claimed Zneul polypeptides (see also W88382-97), including specific domains of Zneul and epitope-bearing portions of Zneul, can be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This claimed polypeptide comprises amino acid residues 105-273 of the human Zneul mature protein (see W88382), i.e. the 2 epidermal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blumberg H,
Whitmore TE;
                      N-PSDB; Z41336.
                                WPI; 1999-591956/51
                                                                                                     17-APR-1998;
                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                              19-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-095324/08
                                                                                                                          17-APR-1998;
                                                                                                                                                  21-OCT-1999
                                                                                                                                                                        DE19817946-A1
                                                                                                                                                                                                                                  Human; uterus;
                                                                                                                                                                                                                                                      Human normal uterus tissue derived protein 33
                                                                                                                                                                                                                                                                                                                          Y59870 standard; Protein; 224 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New mammalian Zneul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ZYMO ) ZYMOGENETICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUN-1997;
                                                                             (META-) METAGEN GES GENOMFORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              raise specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        prowth factor-like domains (see also W88384-85)
                                                                                                                                                                                                                                                                                                                                                                                   10 ggscvqpg
                                                                                                                                                                                                                                                                                                                                                                                                          1 GGLCVQPG 8
                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                    expressed
                                                                                                                                                                                                                                                                                                                                                                                                                               . Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 57-58; 70pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                     98DE-1017946
                                                                                                                           98DE-1017946
                                                                                                                                                                                                                    sequence tag.
                                                                                                                                                                                                                                cancer; treatment; anticancer; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibodies for use e.g. in diagnostic assays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97US-0050143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptides - used
to repopulate blood
                                                                                                                                                                                                                                                                                                                                                                                                                                         87.2%;
87.5%;
                                                       Η,
                                                       Hinzmann B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                          41;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zneul is a new neuro-growth
                                                       Schmitt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sheppard
                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to, e.g. treat Alzheimer's cells
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 169;
                                                       Pilarsky
                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                gene therapy;
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0;

New nucleic acid sequences expressed

in

normal uterine tissues,

and

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RESULT
Y52139
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Best Local Similarity
Thes 7; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novel polynucleotides and polypeptides used to modulate a variety cellular processes \,\cdot\,
                                                                                                                           WPI; 2000-013240/01.
N-PSDB; Z37133.
                                                                                                                                                                                                                                                                                                                                                                                                 TANGO 125; T125; alternative splice variant; EGF domain; antibody; secreted protein; agonist; antagonist; predictive medicine; treatment; forensic biology.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (B) are used (i) to identify agents suitable for treatment of uterine cancer; (ii) directly for treating this form of cancer (including expression from gene therapy vectors) and (iii) for generation of specific antibodies. (A) are identified by assembling EST'S (expressed sequence tags) from a particular tissue type before comparison of expression patterns. This allows a significantly longer fragment of the gene to be revealed, so should reduce the number of failures associated with the fact that ESTs from different libraries may represent different parts of the same unknown gene, distorting the estimated frequency of occurrence in a particular tissue, y59838-y59892 represent protein fragments encoded by the human uterine tissue derived cDNA fragments represented in 241325-241385.
    Y52138-Y52140 are amino acid sequences of (T125). The T125 protein (Y52137) has two
                                             Example 4; Fig 6; 120pp; English.
                                                                                                                                                                         Holtzman DA
                                                                                                                                                                                                                                    23-APR-1998;
23-APR-1999;
                                                                                                                                                                                                                                                                               23-APR-1999;
                                                                                                                                                                                                                                                                                                             28-OCT-1999
                                                                                                                                                                                                                                                                                                                                         W09954437-A2
                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human TANGO 125b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-FEB-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y52139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y52139 standard; Protein; 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention describes novel cDNA sequences (A) highly expressed in normal uterine tissue which can have anticancer and cytostatic activity and can be used for gene therapy. (A) are used (i) for recombinant expression of polypeptides (B) and (ii) to isolate complete genes.
                                                                                                                                                                                                    (MILL-) MILLENNIUM BIOTHERAPEUTICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        derived polypeptides, for treatment of uterine cancer identification of therapeutic agents -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GGLCVQPG 8
|| |||||
65 ggscvqpg 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      224 AA;
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                                                                                                                                                                                                                                  98US-0065363
99US-0065363
                                                                                                                                                                                                                                                                             99WO-US08900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of therapeutic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (T125b) amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
spliced variants epidermal growth
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
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   of TANGO
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RESULT 11
W88382
ID W88382
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Best Local Similarity
Matches 7; Conser
                                                                              Blumberg
Whitmore
New mammalian Zneul polypeptides - used disease, cancer and to repopulate blood
                                                                                                                                                          18-JUN-1997;
18-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (EGF)-like domains at amino acids 107-134 and 141-176 and is predicted to have a molecular weight of approximately 30kD. T125 is predicted to have no transmembrane domains and appears to be a secreted protein. The sequences of all variants of T125 are used in the invention to create antibodies which selectively bind to T125. The T125 polypeptide is used to modulate a variety of cellular processes. It can be used to produce fusion proteins. The protein may also be used to produce antibodies, and to identify T125 antagonists and agonists. The T125 polypucleotides, polypeptides, homologues and antibodies can be used in screening assays; predictive medicine; and methods of treatment of T125 associated disorders. The T125 polypucleotides can be used to express the protein; to detect T125 mRNA; to detect genetic alterations in the T125 gene; in forensic biology; and as a source of primers and probes.
                                                WPI; 1999-095324/08.
                                                                                                                                                                                                         18-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zneu-1; neuro-growth factor-like protein; human; breast cancer;
glioblastoma; pituitary adenoma; Alzheimer's disease; therapy;
                                                                                                                           (ZYMO ) ZYMOGENETICS INC.
                                                                                                                                                                                                                                      23-DEC-1998
                                                                                                                                                                                                                                                                    WO9857983-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                       Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
                                                                                                                                                                                                                                                                                                                                Domain
                                                                                                                                                                                                                                                                                                                                                             Domain
                                                                                                                                                                                                                                                                                                                                                                                          Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-APR-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W88382 standard; Protein; 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nerve regeneration; haematopoiesis; fertility; contraception;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human neuro-growth factor-like protein Zneul mature polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                              TE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247 AA;
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                                                                                             Jelinek LJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                        97US-0878322.
97US-0050143.
                                                                                                                                                                                                       98WO-US12763
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117..:158
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
1..85
                                                                                                                                                                                                                                                                                                                                                                                                       /note= "hydrophilic domain (HSM1), homologous to
an HSMHC3W5A domain "
                                                                                                                                                                                                                                                                                                                                             'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                                                                                                                                     __ epidermal growth factor-like domain 1
                                                                                                                                                                                                                                                                                                                                           "epidermal growth factor-like domain 2"
                                                                                                                                                                                                                                                                                                "domain HSM2 homologous to an domain"
                                                                                             Lehner JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                           Sheppard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
17;
 to, e.g. treat Alzheimer's cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21;
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                                                                                                                                                                                                                                                                                                              HSMHC3W5A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
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RESULT
B42204
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This polypeptide comprises human Zneul mature polypeptide. Zneul Closest human homologue is HSMHC3M5A, a gene in the HLA class III Closest human homologue is HSMHC3M5A, a gene in the HLA class III Cregion, which is contained in a cosmid which contains Notch 4.

Zneul is also homologues to Notch 4 in its EGF-like domains and may compared to the contains of the contains and may compared to the contains which is contained in the EGF core pathways. Zneul is widely expressed in adult tissues, with high expression in heart, placentet, spleen, core in the spinal cord and lymph node. Zneul can be used as growth, maintenance, or differentiation factor in the spinal cord, heart, spleen, testis, thyroid and lymph nodes. It may cord, heart, spleen, testis, thyroid and lymph nodes. It may cord, heart, spleen, testis, thyroid and lymph nodes. It may cord, adenomas. Zneul may also be used to treat Alzheimer's disease, cord adenomas. Zneul may also be used to treat Alzheimer's disease, cord, to repopulate blood cells after chemotherapy, to stimulate cord made in the placenta, in fertility and contraception, or to regenerate nerves. Claimed Zneul polypeptides (see also W8838-97), cord including specific domains of Zneul and epitope-bearing portions of cord including specific domains of Zneul and epitope-bearing portions of cord increase and contraception.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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                                                                                                                                                                                                                                                                                            hypotensive; dermatological; immunosuppressive; antiinflammatory; antiviral; antibacterial; antifungal; antitheumatic; antithyroid; antianaemic; gene therapy; cancer; proliferative disorder; hypertension, neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; anticonvulsant; osteopathc; antiarthritic; immunosuppressant; cardiant immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                   02-APR-1999;
05-APR-1999;
                                                                           31-MAR-1999;
                                                                                                                                                            05-OCT-2000
                                                                                                                                                                                                WO200058473-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human ORFX ORF1968 polypeptide sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B42204 standard; Protein; 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnostic assays.
                                                                                                                     31-MAR-2000;
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|| |||||
95 ggscvqpg 10
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nes 7; Conserv
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                                                                                                                   2000WO-US08621.
                                 99US-0127607.
99US-0127636.
99US-0127728.
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87.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cardiant;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C C74446 to C77606 encode the proteins given in B40237 to B43397, which crepresent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary; antiporiatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antiinflammatory; antibacterial; c dermatological; antifungal; antirheumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder. The nucleic acids can be used to express ORFX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative c disorders, osteoarthritis, graft vs host disease, cardiovascular disease, storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune c disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and c cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
                                                                                             08-MAR-1999;
                                                                                                                                                                                             Homo
                                                                                                                                                                                                                        Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disord secreted protein; transmembrane protein.
                                                                                                                                                                                                                                                                                                                            07-DEC-1999
                                                                                                                                                                                                                                                                                                                                                            Y41769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel nucreating e.g. camuseful for treating e.g. cam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel nucleic acids and peptides derived from open reading frame X, useful for treating e.g. cancers, proliferative disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shimkets RA,
                                                                                                                                                               WO9946281-A2
                                                                                                                                                                                                                                                                                                                                                                                          Y41769 standard;
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                                                                                                                               6-SEP-1999.
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|14 ggscvqpg 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
             98US-0077450.
98US-0077632.
98US-0077641.
98US-0077649.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ą,
                                                                                                                                                                                                                                                                                           protein sequence.
                                                                                             99WO-US05028
                                                                                                                                                                                                                                                                                                                                                                                          Protein; 273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5507pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      87.2%;
87.5%;
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Pred. No. 18;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 265;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                            disorder;
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Matches 7
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22 - MAY - 1998

28 - MAY - 1998

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30 - JUL - 1998

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11 - SEP - 1998
10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
11-MAR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes secreted and transmembrane polypeptides and their polynucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases that may be treated include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies. Z33891 to Z34338, and Y41685 to Y41774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention.
                                                                                                                                                              Human;
probe;
                                                        08-MAR-1999;
                                                                                                                                                                                                                       07-DEC-1999
                                                                                                                                                                                                                                           Y41770;
                                                                                                                                                                                                                                                                  Y41770 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Fig 213;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New secreted and transmembrane polypeptides and their polynucleotides, useful for treating blood coagulation disorders, cancers and cellular adhesion disorders -
                                                                               16-SEP-1999
                                                                                                       WO9946281-A2
                                                                                                                              Homo
                                                                                                                                                    secreted
                                                                                                                                                                                              Human PRO1330 protein sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH )
                                                                                                                                                                                                                                                                                                                           114
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|14 ggscvqpg
                                                                                                                                                                                                                                                                                                                                                                      Local Similarity hes 7; Conserv
                                                                                                                                                                                                                                                                                         14
                                                                                                                             sapiens.
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DB; Z34311.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WI,
                                                                                                                                                             PRO; EST; expressed sequence tag; PCR primer; hybridisation; blood coagulation disorder; cancer; cellular adhesion disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENENTECH INC:
                                                                                                                                                  protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                               273 AA;
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                                                                                                                                                                                                                                                                                                                           121
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98US-0086414.
98US-0086430.
98US-0086486.
98US-0087098.
98US-0087106.
98US-0087208.
98US-0094651.
98US-0100038.
98US-0077450.
98US-0077632.
98US-0077641.
98US-0077649.
                                                        99WO-US05028
                                                                                                                                                                                                                                                                  Protein;
                                                                                                                                                  transmembrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            530pp; English.
                                                                                                                                                                                                                                                                                                                                                                                87.2%;
87.5%;
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                                                                                                                                                                                                                                                                  273
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Pred. No.
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                                                                                                                                                                                                                                                                  A.
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18;
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                                                                                                                                                                                                                                                                                                                                                                                            20;
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                                                                                                                                                                                                                                                                                                                                                                                           Length 273;
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13-MAR-1998
20-MAR-1998
20-MAR-1998
20-MAR-1998
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20-MAR-1998
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20-MAR-1998
27-MAR-1998
27-MAR-1998
27-MAR-1998
31-MAR-1998
31-APR-1998

98US-0080127 98US-0080127 98US-0080327 98US-0080333 98US-0081070 98US-0081070 98US-0081123 98US-008125 98US-008125 98US-008125 98US-0082704 98US-0082704 98US-0082704 98US-0082704 98US-0082704 98US-008332 98US-008332 98US-008345 98US-008345 98US-008345 98US-008345 98US-0084441 98US-0084627 98US-0084629 98US-0084629

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98US-0077791
98US-0077891
98US-0078886
98US-0078936
98US-0079856
98US-0079556
98US-0079563
98US-0079589
98US-0079589
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Matches 7
10-MAR-1998;
11-MAR-1998;
11-MAR-1998;
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11-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
22-MAY-1998;
28-MAY-1998;
28-MAY-1998;
30-JUL-1998;
11-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes secreted and transmembrane polypeptides and their polynucleotides. The nucleotide sequences are useful as sources of probes, primers, for chromosome mapping, and for generation of antisense sequences. They can also be used to create transgenic animals. The proteins can be used to treat a variety of diseases and disorders, depending on their function. Diseases that may be treated include blood coagulation disorders, cancers and cellular adhesion disorders. They may also be used to raise antibodies. 23891 to 234338, and v41685 to v41774 represent polynucleotide and polypeptide sequence given in the exemplification of the present invention.
                                                                                                                              Homo
                                                                                                                                                  Human; PRO; EST; expressed sequence tag; PCR primer; hybridisation; probe; blood coagulation disorder; cancer; cellular adhesion disord secreted protein; transmembrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New secreted and transmembrane polypeptides and useful for treating blood coagulation disorders,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH
                                                                                                                                                                                                         Human PRO1449
                                                                                                                                                                                                                                  07-DEC-1999
                                                                                                                                                                                                                                                          Y41771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 12; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            adhesion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-551358/46.
N-PSDB; Z34312.
                                                   08-MAR-1999;
                                                                           16-SEP-1999
                                                                                                      WO9946281-A2
                                                                                                                                                                                                                                                                                   Y41771
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                                                                                                                             sapiens
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                                                                                                                                                                                                                                                                                   standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                   7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            disorders
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215;
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                                                                                                                                                                                                       protein sequence
98US-0077632.
98US-0077641.
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98US-0086023

98US-0086414

98US-0086410

98US-0086486

98US-0087098

98US-0087208

98US-0087208

98US-0094651

98US-0100038
                                                  99WO-US05028
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87
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Pred. No. 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                               20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        their polynucleotides, cancers and cellular
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 273;
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0

Gaps

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disorder;

12-MAR-1998
17-MAR-1998
20-MAR-1998
20-MAR-1998
20-MAR-1998
20-MAR-1998
20-MAR-1998
20-MAR-1998
27-MAR-1998
27-MAR

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PR 12-MAR-1998; 98US-0077649; PR 12-MAR-1998; 98US-0077031.
PR 13-MAR-1998; 98US-0078020.
PR 20-MAR-1998; 98US-0078020.
PR 20-MAR-1998; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079894; 98US-0079663; 98US-0081070; 98US-0
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Query Match
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Matches 7
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115 -MAY -1998;
118 -MAY -1998;
22 -MAY -1998;
22 -MAY -1998;
22 -MAY -1998;
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23 -MAY -1998;
26 -MAY -1998;
27 -MAY -1998;
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                                                                                                                                                                                                                                    Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH ) GENENTECH INC.
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DB; Z34313.
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         Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fig 217; 530pp; English.
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                                                                                                                                                                                                                               273
         Conservative
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98US-0086486.
98US-0086486.
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87.5%;
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Pred. No.
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core 41; DB red. No. 18; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker KP,
                                                                                          20;
1;
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Indels
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0;
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Matches 7; Conservative 0; Mismatches 1; Indels 0; Gaps

Qy 1 GGLCVQPG 8

Db 114 ggscvqpg 121

Search completed: June 13, 2001, 14:14:39

Job time: 380 sec
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Title:
Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
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     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq length: 0 seq length: 2000000000
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1: pir1:*
2: pir2:*
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4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               June 13, 2001, 14:10:46; Search time 130.61 Seconds (without alignments) 4.209 Million cell updates/sec
     87.2
83.0
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Gapop 10.0 , Gapext 0.5
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47
1 GGLCVQPG 8
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pir2:*
pir3:*
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   В
 A59180
B65020
B65020
B65020
B70512
S710512
S726615
B70626

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wnt inhibitory fac
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probable aminotran
nuclear factor I-A
hypothetical prote
transcription fact
nuclear factor I-A
beta-1,4-mannosyl-
beta-1,4-mannosyl-
beta-1,4-mannosyl-
ribonucleoside-dip
atrophin-1 - human
atrophin-1 - human
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nuclear factor I-X
nuclear factor I-X
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B 8

1 GGLCVQPG 8 ||||: || 219 GGLCMSPG 226

<pre>Query Match Best Local Similarity 75.0%; Score 39; DB 2; Length 378; Best Local Similarity 75.0%; Pred. No. 7; Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;</pre>	RESULT 2 B59180 Wnt inhibitory factor-1 - zebra fish C;Species: Brachydanio rerio (zebra fish) C;Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text_change 18-Feb-2000 C;Accession: B59180 R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, R;Hsieh, J.C.; Rebbert, A.; Rattner, A.; Rebbert, M.L.; Rattner, A.; Rattne	Query Match 87.2%; Score 41; DB 2; Length 379; Best Local Similarity 87.5%; Pred. No. 2.9; Matches 7; Conservative 0; Mismatches 1; Indels 0; Gaps 0; QY 1           Db 221 GGLCVTPG 228	RESULT 1 A59180 A59180 Wnt inhibitory factor-1 - human C;Species: Homo sapiens (man) C;Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text_change 18-Feb-2000 C;Accession: A59180 R;Hsieh, J.C.; Kodjabachian, L.; Rebbert, M.L.; Rattner, A.; Smallwood, P.M.; Samos, Nature 398, 431-436, 1999 A;Title: A new secreted protein that binds to Wnt proteins and inhibits their activit A;Reference number: A59180; MUID:99215557 A;Rature: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-379 <hsi> A;Cross-references: GB:AF122922; NID:94585369; PIDN:AAD25402.1; PID:94585370</hsi>	ALIGNMENTS	30 34 72.3 98 2 \$26929 Ig heavy chain V r 31 34 72.3 120 2 \$44111 Ig heavy chain V r 32 34 72.3 196 2 F71525 hypothetical prote 33 34 72.3 196 2 H81681 C-5 ketoreductase 34 72.3 302 2 T44578 C-5 ketoreductase 35 34 72.3 331 2 T28374 ORF MSY213 hypothe 36 34 72.3 403 2 E69873 Graduate dehydrog 37 34 72.3 467 2 D72461 glutamate dehydrog 38 34 72.3 467 2 D72461 hypothetical prote 39 34 72.3 505 2 H83196 hypothetical prote 40 34 72.3 948 2 E82206 hypothetical prote 41 34 72.3 2531 2 A46019 Notch homolog Motch 42 34 72.3 2555 2 A40043 notch protein homo 43 37 70.2 324 2 S61447 ccellulase (EC 3.2.
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A;Title: Sequencing and functional analysis of a 32 560 bp segment on the left A;Reference number: S39824; MUID:94205266 A;Accession: S39830 A;Molecule type: DNA A;Residues: 1-423 <SCH>
                                                                                                                                        N;Alternate names: hypothetical protein YBL0509; hypothetical protein YBL05; C;Species: Saccharomyces cerevisiae C;Species: 16-Dec-1993 #sequence_revision 09-Sep-1994 #text_change 29-Oct-1999 C;Accession: S39830; S45793; S37331
                                                                                                                                                                                                                                                  RESULT
S39830
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C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 16-Jul-1999
C;Accession: T10512
R;Larimer, F.W.
submitted to the EMBL Data Library, November 1995
A;Description: Seguence and expression of the pentose-5-phosphate 3-epimera.
A;Reference number: Z17063
                                                                                               C;Accession: S39830; S45793; S37331
R;Scherens, B.; el Bakkoury, M.; Vierendeels, F.; Dubois, Yeast 9, 1355-1371, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-260 <LAR>
A; Cross-references: EMBL: U23145; NID: 92564972;
A; Experimental source: strain ATCC 11166
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A;Status: prelimina
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A;Experimental source: strain K-12, substrain MG1655
C;Genetics:
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A; Residues: 1-278 <B
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A;Title: The complete genome sequence of Escherichia coli K-12
A;Reference number: A64720; MUID:97426617
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.A.; Rose, D.J.; Mau,
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C; Species: Escherichia coli
                                                                                                                                                                                                      hypothetical protein YBLO58w - yeast (Saccharomyces cerevisiae)
N;Alternate names: hypothetical protein YBLO509; hypothetical p
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85.7%;
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Pred. No.
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C;Genet
A;Gene:
   A;Cross-references: EMBL:X68153; NID:g63665; PID:g63666 R;Kruse, U.; Sippel, A.E. U.; Mol. Biol. 238, 860-865, 1994 A;Title: The genes for transcription factor nuclear fac
                                                                     A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-241 <KRU>
                                                                                                                                                                                           C;Species: Gallus gallus (chicken)
C;Date: 03-May-1994 #sequence_revi
C;Accession: S26615; S45566
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A; Residues: 1-427 <STO>
A; Cross-references: GB:
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                                                                                                                                         submitted to the EMBL Data A; Reference number: S26614
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A; Residues: 1-423 < DUB>
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A;Experimental source: strain S288C
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; S45566
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75.0%;
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RESULT 9
E36596
nuclear factor I (clone B5) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 08-Dec-2000
C;Accession: E36596
R;Inoue, T:, Tamura, T:, Furuichi, T.; Mikoshiba, K.
J. Biol. Chem. 265, 19065-19070, 1990
A;Title: Isolation of complementary DNAs encoding a cerebellum-enriched nuclear factor A;Reference number: A36596; MUID:91035434
A;Accession: E36596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein Rv0263c - Mycobacterium tuberculosis (strain H37RV)
C; Species: Mycobacterium tuberculosis
C; Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 21-Jul-2000
C; Accession: B70627
R; Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Go; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holr
Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
Rature 393, 537-544, 1998
A; Authors: Squres, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
A; Title: Deciphering the biology of Mycobacterium tuberculosis from the complete
A; Reference number: A70500; MUID:98295987
A; Accession: B70627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Reference number: S45565; MUID:94238700
A; Accession: S45566
A; Status: preliminary; nucleic acid sequence
A; Molecule type: mRNA
A; Residues: 2-202 <KR2>
A; Cross-references: EMBL:X68153
C; Superfamily: human nuclear factor I
                                                                                                                                                                         A; Residues: 1-309 < INO>
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Best Local Similarity
Fatches 5; Conserv
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C; Superfamily:
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                                                                                                                                C; Superfamily: human nuclear factor
                                                                                                                                                      A;Cross-references: GB:D90172; GB:M58637
                                                                                                                                                                                                                A; Status: preliminary
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A; Residues: 1-300 <COL>
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Best Local Similarity
Matches 6; Conserv
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                       Conservative (
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                       74.5%; Score 35; DB
100.0%; Pred. No. 33
.ive 0; Mismatches
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26;
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R:Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K. Nature 393, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Wh A;Title: Deciphering the biology of Mycobacterium tu
                                                                                                                                                                                                                RESULT
A70856
                                                                                                                           probable lppZ protein - Mycobacterium tuberculosis (strain H37RV)
c;Species: Mycobacterium tuberculosis
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 22-Oct-1999
C;Accession: A70856
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T.; Churcher, C.; Harris, D.; T.; Gentles, S.; Hamlin, N.; H

Holroyd,

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Skelton,

s.;

Whitehead, S.; Barrell tuberculosis from the

Barrell, Squares,

B

complete

geno

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nuclear factor 1 family protein A2 - rat (fragment)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 07-Jul-1997 #sequence_revision 17-Sep-1997 #text_change 08-Dec-2000
C;Accession: PC4293
R;Osada, S.: Daimon, S.; Ikeda, T.; Nishihara, T.; Yano, K.; Yamasaki, M.; 1
J. Biochem. 121, 355-363, 1997
A;Title: Nuclear factor 1 family proteins bind to the silencer element in the A;Reference number: JC5428; MUID:97244636
A;Accession: PC4293
A;Accession: PC4293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nuclear factor I (clone B6) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 12-Apr-191 #sequence_revision 12-Apr-1991 #text_change 08-Dec-2000
C;Accession: F36596
R;Inoue, T.: Tamura, T.; Furuichi, T.; Mikoshiba, K.
J. Biol. Chem. 265, 19065-19070, 1990
A;Title: Isolation of complementary DNAs encoding a cerebellum-enriched nucl
A;Reference number: A36596; MUID:91035434
                                                                                                                                                                         ferase P gene expression.
C;Superfamily: human nuclear factor I
                                                                                                                                                                                                             A;Cross-references: DDBJ:D78020; NID:g1041037; PIDN:BAA;Experimental source: liver C;Comment: This protein is a dominant form of nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
PC4293
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A; Residues: 1:357 < OSA>
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A; Residues: 1-347 <INO>
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Matches 6
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Best Local Similarity
Matches 6; Conser
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19
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                      2 GLCVQP 7
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GLCVQP
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llarity 100.0%;
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ilarity 100.0%;
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Pred. No.
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Pred. No.
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37
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Query Match
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                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-431 <KRU>
                                                                                                                                                                                                                                                                 C;Accession: S20065
R;Kruse, U.; Qian, F.; Sippel, A.E.
Nucleic Acids Res. 19, 6641, 1991
A;Title: Identification of a fourth nuclear factor I gene in chicken by cDNA cloning: NF
A;Reference number: S20065; MUID:92093631
                                                                                                                                                                                                                                                                                                                                                        N;Alternate names: transcription factor x
C;Species: Gallus gallus (chicken)
C;Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 08-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Species: Gallus gallus (chikken)
C;Date: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 08-Dec-2000
C;Accession: S45569; S26618
R;Kruse, U; Sippel, A.E.
J. Mol. Biol. 238, 860-865, 1994
A;Title: The genes for transcription factor nuclear factor I give rise to corresponding A;Reference number: S45565; MUID:94238700
A;Status: preliminary; nucleic acid sequence not shown
                                                                                                                                                                                                                     A;Status: preliminary; nucleic acid sequence not shown; translation not shown
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S20065
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A;Residues: 1-386 <KRU>
A;Cross-references: EMBL:X68156; NID:g63671; PIDN:CAA48259.1; PID:g63672
C;Superfamily: human nuclear factor I
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A;Accession: A70856
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-373 <COL>
A;Cross-references: GB:AL021287; GB:AL123456; NID:g3261508; PIDN:CAA16091.1; PID:e12377;
A;Experimental source: strain H37Rv
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Best Local Similarity 100.0%;
Matches 6; Conservative
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Best Local Similarity
Matches 5; Conserv
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2 GLCVQP 7
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                                                    74.5%;
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Pred. No.
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Pred. No.
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Query Match
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"hes 6; Conserv
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551773
transcription factor NFI-X2 - African clawed frog
C:Species: Xenopus laevis (African clawed frog)
C:Date: 07-May-1995 #sequence_revision 03-Nov-1995 #text_change 08-Dec-2000
Search completed: June 13, 2001, 14:10:47 Job time: 148 sec
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                                                                                                                                                                                                                                               A;Molecule type: mRNA
A;Residues: 1-433 <ROUD:
A;Cross-references: EMBL:Z34463; NID:g607204; PID:g607205
C;Superfamily: human nuclear factor I
                                                                                                                                                                                                                                                                                                                                         C;Accession: S51773
C;Accession: S51773
R;Roulet, E.; Armentero, M.; Dreyer, C.; Mermod, N.; Wahll, W.
submitted to the EMBL Data Library, June 1994
A:Description: DNA binding activity of xenopus nuclear factor X is negatively regulat
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Maximum DB
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Listing first 45 summaries
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Perfect score:
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   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Q09327 h beta-1,4-
Q10470 m beta-1,4-
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P54258 ratus norv
P54259 homo sapien
007639 bacillus su
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224	200	192	186	336	304	272	240	208	379		;		2GF_1; 5.	FLAMINI	u				AF122922; AAD25402.1;		license	license	statemen!	: insti	formatic	Institu	try is co	AT DITING	TATION:	MESODER	S TO WNT	(1999).		otein th	pachian I	PubMed=1				Chordata;			Last	40, Last	10, Created)	STANDARD;		
POTENTIAL.	POTENTIAT	POTENTIAL.	POTENTIAL.	EGF-LIKE 5.	EGF-LIKE 4.	EGF-LIKE 3.		EGF-LIKE 1.	WNT INHIBITORY FACTOR 1.	POTENTIAL.	Signal; Developmental protein.	•		<b>z.</b>					.*		e@isb-sib.ch).	entitles requires a license agreement (See http://www.isb-sib.ch/announce/	t is not removed. Usage by and for commercial		the European Bioinformatics Institute. There are no restrictions on its	te of Bioinformatics and the EMBL outstation -	Ä	THE LABORATE CONTINUES OF BUSINESS FOR THE PROPERTY OF		BE INVOLVED IN MESODERM SEGMENTATION.	FUNCTION: BINDS TO WAT PROTEINS AND INHIBITS THEIR ACTIVITIES. MAY			"A new secreted protein that binds to wat proteins and inhibits their	Hsien JC., Kodjabachian L., Rebbert M.L., Rattner A.,	0201374;				ta; Craniata; Vertebrata; Euteleostomi;		I PRECORSOR (WIF-I).	annotation update)	sequence update)	ted)	PRT; 379 AA.	:	

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InterPro; IPR000561; -.
InterPro; IPR000264; -.
InterPro; IPR002049; -.
Pfam; PF00008; EGF; 5.
PROSITE; PS00011; EGFLAMININ.
PROSITE; PS00102; EGF_1; 5.
PROSITE; PS001022; EGF_2; 4.
PROSITE; PS01186; EGF_2; 4.
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SIGNAL 1 28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

MEDLINE-99215557; PubMed-10201374;

Hsieh J.-C., Kodjabachian L., Rebbert M.L., Rattner A.,

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans

A new secreted protein that binds to Wnt proteins and inh

activities.",

Nature 398:431-436(1999).

-1- FUNCTION: BINDS TO WNT PROTEINS AND INHIBITS THEIR ACT
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Mammalia; Eutheria; Rodentia;
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BE INVOLVED IN MESODERM SEGMENTATION.
SUBCELLULAR LOCATION: SECRETED.
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in; Signal; Developmental protein.
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9 WNT INHIBITORY FACTOR 1.
08 EGF-LIKE 1.
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                                                              Aiba H., Baba T., Fujita K., Hayashi K., Honjo A., Horiuchi T., Ikemoto K., Inada T., Isono K., Isono S., Itoh T., Kanai K., Kasai H. Kashimoto K., Kim S., Kimura S., Kitagawa M., Kitakawa M., Makino K., Masuda S., Miki T., Mizobuchi K., Mori H., Motomura K., Makamura Y., Mashimoto H., Nishio Y., Oshima T., Saito N., Sampei G., Seki Y., Tagami H., Takemoto K., Wada C., Yamamoto Y., Yano M.; Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
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01-NOV-1997
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STRAIN-KI2 / MG1655;
MEDLINE=97426617; PubMed=9278503;
MEDLINE=97426617; PubMed=9278503;
Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Griegor J., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
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                                                                                                               EMBL; AFO
StyGene;
SEQUENCE
                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                              Rofold E.C., Rappleye C.A., Stojiljkovic I., Roth J.R.;
"The 17-gene ethanolamine (eub.) operon of Salmonella typhimurium encodes five homologues of carboxysome shell proteins.";
J. Bacteriol. 181:5317-5329(1999).
-I- PATHWAY: ETHANOLAMINE UTILIZATION.
                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-ATCC 14028;
STRAIN-ATCC 14028;
MEDLINE-95173114; PubMed-7868611;
Stoj11jkovic I., Bacumler A.J., Heffron F.;
Tethanolamine utilization in Salmonella typhimurium: n sequence, protein expression, and mutational analysis cchB eutE eutJ eutG eutH gene cluster.";
J. Bacteriol. 177:1357-1366(1995).
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                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
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01-NOV-1995 (Rel.
30-MAY-2000 (Rel.
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Proteobacteria;
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                                                                                                                                                     EMBL;
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GGSCMQPG
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AF093749; AAC78119.1; -.
:ne; SG10554; eutJ.
:NCE 279 AA; 30018 MW;
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6; Conserv
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email to license@isb-sib.ch).
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SHP1_YEAST
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Matches 6
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EMBL; Z35819; CAA84878.1; -.
PIR; S39830; S39830.
PIR; S37331; S37331.
SGD; S0000154; SHP1.
Interpro; IPR01012; -.
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Pfam; PF00789;
SEQUENCE 423
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P34223;
01-FEB-1994
                                                     NFIX_CHICK STANDARD; PRT; 431 AA. 90932; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 30-MAY 2000 (Rel. 39, Last annotation update) NUCLBAR FACTOR 1/X (NFIX) (NFIX) (CAAT-BOX FACTOR) (CTF) (TGGCA-BINDING PROTEIN).
               Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its most profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhang S., Guha S., Volkert F.C.;
"The Saccharomyces SHP1 gene, which encod phosphoprotein phosphatase 1 with differentiation, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scherens B., el Bakkoury M., Vierendeels F., Dubois E., "Sequencing and functional analysis of a 32,560 bp segme left arm of yeast chromosome II. Identification of 26 of frames, including the KIP1 and SEC17 genes."; Yeast 9:1355-1371(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHP1 OR YBL058W OR YBL0509 OR YBL0515.
Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina;
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01-NOV-1995
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Mol. Cell. Biol.
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Zhang S., Guha S., Volkert F.C.;
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85 GGLCPKPG
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 Metazoa; Chordata; a; Aves; Neognathae;
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 Craniata; Ver ; Galliformes;
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DE FACTOR
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RX MEDLIN
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                     Qian F., Kruse
                                                    SEQUENCE
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NCBI_TaxID-9031;
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                              SEQUENCE OF 19-228 FROM N.A. MEDLINE-96070434; PubMed-7590749;
                                                                                    Nucleic
                                                                                                                                                           MEDLINE-95023136; PubMed-7937100;
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PROSITE; PS00349; CTF_NFI; 1.

Transcription regulation; DNA replication; DNA-binding; Activator; Nuclear protein; Multigene family; Alternative splicing. SEQUENCE 431 AA; 46903 MW; 83989A029ZE74D6C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
   lian F., Kruse U., Lichter P., S: Chromosomal localization of the
                                                                                                                                                                                              SEQUENCE FROM N.A.
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Kruse U., Qian F., Sippel A.E.;
"Identification of a fourth nuclear factor I
cloning: NFI-X.";
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SUBGULLULAR LOCATION: NUCLEAR.

ALTERNATIVE PRODUCTS: DIFFERENT FORMS OF CTF/NF-I CAN BE PRODUCT.
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                                                                                                cell-type
                                                                     , Liu Y., Bernard H.U.; Itiu Y., Bernard H.U.; ng and functional analysis of spliced isoforms of human nuclear I-X: interference with transcriptional activation by NFI/CTF ell-type specific manner."; c Acids Res. 22:3825-3833(1994).
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6; Conserv
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Pred. No.
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the promoter for 3-hydroxy-3-methylglutaryl-coenzyme A reductaryl-coenzyme A reductaryl-
                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

MEDLINE-89057859; PubMed-3194401;

Gil G. Smith J.R., Goldstein J.L.,

Brown M.S., Osborne T.F.;
                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FACTOR) (CTF) (TGGCA-BINDING PROTEIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Multiple genes encode nuclear factor 1-like proteins that bind
                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR000647; -.
Pfam; PF00859; CTF_NFI; 1.
PROSITE; PS00349; CTF_NFI; 1.
Pranscription regulation; DNA replication; DNA-binding; Activator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; L31881; AAA53422.1; EMBL; U07811; AAA93126.1; MIM; 164005; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extrement burppean Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nuclear protein; Multigene family;
VARSPLIC 318 359 MISSI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160 GLCVQP 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 GLCVQP 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91
441 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         74.5%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                auratus
                                                                                                                                                                                                                                                                                                                                                                          s (Golden hamster).
Chordata; Craniata; Vert
Rodentia; Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91
48883
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amily; Alternative splicing.
MISSING (IN ISOFORM NET-X2).
Y -> F (IN REF. 2).
Y 304AFF8993B9668E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                      Slaughter
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26;
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                                                                                                                                                                                                                                                                                                                                                                               Muridae;
                                                                                                                                             PALINDROMIC SEQUENCE 5'-
                                                                                                                                                                                                                                                      C.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BINDING TRANSCRIPTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 441;
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                                                                                                                                                                                                                                                      Orth K.,
                                                                                                                                                                                       A reductase.
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                                                                                REPLICATION.
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6
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NFIX, MOUSE
ID NFIX, MAC P70257
AC P70257
AC P70257
DT 01-NOV
DT 0
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   the Europuse by modified
                                                                                                                                                                                 Chaudhry A.Z., Lyons G.E., Gronostajski R.M.;
Chaudhry A.Z., Lyons G.E., Gronostajski R.M.;
Expression patterns of the four nuclear factor I genes during mouse embryogenesis indicate a potential role in development.";
Dev. Dyn. 208:313-325(1997).
-I- FUNCTION: CTF/NF-I RECOGNIZE AND BIND THE PALINDROMIC SEQUENCE 5'-
TTGGCUNNINGCCAA-3' PRESENT IN VIRAL AND CELLULAR PROMOTERS AND IN
THE ORIGIN OF REPLICATION OF ADENOVIRUS TYPE 2. THESE PROTEINS ARE
INDIVIDUALLY CAPABLE OF ACTIVATING TRANSCRIPTION AND REPLICATION.
-I- SUBGUITT: BINDS DNA AS AN HOMODIMER.
-I- SUBCELLULAR LOCATION: NUCLEAR.
-I- ALTERNATIVE PRODUCTS: DIFFERENT FORMS OF CTF/NF-I CAN BE PRODUCED
BY DIFFERENTIAL SPLICING OF THE SAME GENE.
-I- STMILARITY: BELONGS TO THE CTF/NF-I FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-NIH SWISS;
Ebel T.T., Sippel A.E.;
Submitted (SEP-1996) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutherla; Rodentia;
MCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last anotation update)
NUCLEAR FACTOR 1/X (NFI-X) (NF-I/X) (CCAAT-BOX BINDING FACTOR) (CTF) (TGGCA-BINDING PROTEIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000647; ...

Pfam; PF00859; CTF_NET; 1.

PROSITE; PS00349; CTF_NET; 1.

Transcription regulation; DNA replication; DNA-binding; Activator; Nuclear protein; Multigene family; Alternative splicing.

SEQUENCE 441 AA; 48837 MW; 38CB7326EDC92859 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSFAC; T00610; -.
TRANSFAC; T01036; -.
InterPro; IPR000647;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-BALB/C;
MEDLINE-97209336; PubMed-9056636;
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P70257; P7
                                                                                                      between
                                                                                                                                This SWISS-PROT entry is copyright.
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                                                                 European
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P70258; 008519;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.
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                                                        Swiss Institute of Bioinf Bioinformatics Institute.
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                                institutions
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Pred. No.
                                yright. It is produced through a collaboration of Bioinformatics and the EMBL outstation. That are no restrictions on its tions as long as its content is in no way
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Sciurognathi; Muridae;
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   as long a
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26;
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; Murinae; Mus
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Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mol.
                                                                                                                                                                               MEDLINE-89030607; PubMed=3053160; Paonessa G., Gounari F., Frank R., Corte Paonessa G., Gounari F., Frank R., Corte Cortification of a NF1-like DNA-binding cloning of the corresponding cDNA."; EMBO J. 7:3115-3123(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NFIL_RAT STANDARD; PRT; 509 AA. P09414; Q63782; O1-MAR-1989 (Rel. 10, Created) O1-NOV-1997 (Rel. 35, Last sequence update) 30-MAY-2000 (Rel. 39, Last annotation update) NUCLEAR FACTOR 1 (NF-I) (CCAAT BOX-BINDING TR. (TGGCA-BINDING PROTEIN) (NFI-A).
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Pfam; PF00859; CTF_NFI; 1.

PROSITE; PS00349; CTF_NFI; 1.

Transcription regulation; DNA replication; DNA-binding; Nuclear protein; Multigene family; Alternative splicing varspic 320 MISSING (IN ISOFORM MEIX2).

SEQUENCE 441 AA; 48867 MW; FOFCB00C2CD52480 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. STRAIN-SPRAGUE-DAWLEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-SPRAGUE-DAWLEY;
MEDLINE-96429753; PubM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; Y07688; CAA68952.1; -.
EMBL; Y07689; CAA68953.1; -.
EMBL; U57636; AAB49931.1; -.
MGD; MGI:97311; Nfix.
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or send an email (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "A complex interplay of positive and negative elements for the different transcriptional activity of liver NF1 Mol. Biol. Rep. 21:147-158(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nicosia A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                       TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                     "Nuclear factor 1 family proteins bind rat glutathione transferase P gene."; J. Biochem. 121:355-363(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Monaci P
                                                                                                                                                                                                                                                                                                                                                                                                                                         Imagawa M.;
                                                                                                                                                                                                                                                                                                                          EQUENCE OF
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FUNCTION: CTF/NF-I RECOGNIZE AND BIND THE PALINDROMIC SEQUENCE OF A CONTROL OF A CONTROL AND CELLULAR PROMOTERS THE ORIGIN OF REPLICATION OF ADEMOVIRUS TYPE 2. THESE PROTINUIVIDUALLY CAPABLE OF ACTIVATING TRANSCRIPTION AND REPLISUBUNIT: BINDS DNA AS AN HOMODIMER. SUBCULLAR LOCATION: NUCLEAR.
ALTERNATIVE PRODUCTS: DIFFERENT FORMS OF CTF/NF-I CAN BE EBY DIFFERENTIAL SPLICING OF THE SAME GENE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           s requires a license agreement (See http://www.isb-sib.ch/announce/an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Daimon
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          WLEY; TISSUE-Liver;
PubMed=9089412;
S., Ikeda T., Nishihara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=8832903; M., Stampfli S.,
                                                                                                                                                                                                                                                                                                                            FROM
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                                                              ese R.;
protein
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26;
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                                                                                                                                                                                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                   rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yamasaki
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                                                                                                                                                                                                                                   liver
                                                                                              REPLICATION
                                                                                                                   PROTEINS
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NFIA_CHICK
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Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                         "Chicken NFI/TGGCA proteins are encoded by at least three independent genes: NFI-A, NFI-B and NFI-C with homologues in mammalian genomes.";
Nucleic Acids Res. 18:2607-2616(1990).

-1- FUNCTION: CTF/NF-I RECOCNIZE AND BIND THE PALINDROMIC SEQUENCE 5'-TTGGCNNNINGCCAA-3' PRESENT IN VIRAL AND CELLULAR PROMOTERS AND IN THE ORIGIN OF REPLICATION OF ADENOVIRUS TYPE 2. THESE PROTEINS ARE INDIVIDUALLY CAPABLE OF ACTIVATING TRANSCRIPTION AND REPLICATION.

-1- SUBCULIVE BINDS DIA AS AN HOMODIMER.

-1- SUBCULIVAR LOCATION: NUCLEAR.

-1- ALTERNATIVE PRODUCTS: DIFFERENT FORMS OF CTF/NF-I CAN BE PRODUCED BY DIFFERENTIAL SPLICING OF THE SAME GENE.

-1- MISCELLANEOUS: IN CHICKEN NET/TAGGCA PROTEINS ARE ENCODED BY AT LEAST THERE INTERPREDICTION CENEC. NET-A NET-D AND NET-D 
                                                                                                                                                                                   This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X84209; CAA58995.1; -.
EMBL; X93167; CAA31565.1; -.
EMBL; X13167, CAA31565.1; -.
PIR; S01300; S01300.
TRANSFAC; T00599; -.
InterPro; IDR000647; -.
Pfam; PF00859; CTF_NFI; 1.
PROSITE; PS00349; CTF_NFI; 1.
TRANSCTIPTION regulation; DNA replication; DNA-binding; Activator; Nuclear protein; Multigene family; Alternative splicing.
Nuclear protein; Multigene family; S9120C7090229F87 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
NUCLEAR FACTOR 1 A1 (NF-I) (CCAAT BOX-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Embryo;
MEDLINE-90251434; PubMed-2339052;
MEDLINE-90251434; PubMed-2339052;
                                                                                                                                          between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Archosauria; Aves;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (CTF)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NFIA_CHICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  160 GLCVQP 165
    s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way lifted and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 GLCVQP 7
                                                                                                                                                                                                                                                          LEAST THREE INDEPENDENT GENES: NFI-A, NFI-B AND SIMILARITY: BELONGS TO THE CTF/NF-I FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE CTF/NF-I FAMILY. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TGGCA-BINDING
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6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Neognathae; Galliformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AND
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Pred. No. 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi;
; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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Usage
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 509
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SO SERVICE CONTRACTOR CONTRACTOR

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RA Thara Y. Nishikawa A. Toma T. Soejima H., Niikawa N., Taniguchi N.;

RT "CDNA Cloning, expression, and chromosomal localization of human N-

RT acetylglucosaminyltransferase III (GnT-III).";

RI J. Biochem. 113:692-698(1993).

CC -!- FUNCTION: IT IS INVOLVED IN THE REGULATION OF THE BIOSYNTHESIS AND

CC -!- FUNCTION OF CALCETYL-GLOCOSAMINE IN BETA 1-4 LINKAGE TO THE

BIOLOGICAL FUNCTION OF THE TRIMANNOSYL CORE OF N-LINKAGE SUGAR

CC THE ADDITION OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE

CC CHAINS. IT IS ONE OF THE TRIMANNOSYL CORE OF N-LINKAGE SUGAR

CC CHAINS. IT IS ONE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE

CC REGULATION OF THE BIOSYNTHESIS OF GLYCOPROTEIN OLIGOSACCHARIDES.

CC -!- CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLYCOSAMINE + N-ACETYL-BETA-D-

CC GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 3 (N-ACETYL-BETA-D-GLYCOSAMINYL-

CC GLUCOSAMINYL-1, 3-ALPHA-D-MANNOSYL-1, 5 DETA-D-MANNOSYL-1, 4-N-

CC ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-

CC D-MANNOSYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-

CC D-MANNOSYL-1, 4-N-ACETYL-BETA-D-GLUCOSAMINYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
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Best Local S
Matches 6
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__HUMAN STANDARD; PRT; 531 AA.

GNT3_HUMAN STANDARD; PRT; 531 AA.

GO9327;

01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1996 (Rel. 34, Last annotation update)
01-OCT-1996 (Rel. 34, Last annotation update)
BETA-1,4-MANNOSYL-GLYCOPROTEIN BETA-1,4-N-ACETYLGLUCOSAMINYL-
TRANSFERRASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOPROTEIN
N-ACETYLGLUCOSAMINYLTRANSFERASE III) (N-ACETYLGLUCOSAMINYLTRANSFERASE
                  EMBL; D13789; BAA02937.1; PIR; JN0586; JN0586.
                                                                                      use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extra the European Bioinformatics Institute. There are no restrained to the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pram; PROMS59; CTF_NFI; 1.

PROSITE; PS00349; Activator; DNA-binding; Activator; Nuclear protein; Multigene family; Alternative splicing.

SCOURMCE 522 AA; 57473 MW; C51F3E5FE6077740 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE-93380894; PubMed-8370666;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            III) (GNT-III) (GLCNAC-T
MGAT3 OR GGNT3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                interPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X51486; CAA35853.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 6; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ens (Human).
; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR000647;
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Matches 5
BIOLOGICAL FUNCTION OF GLYCOPROTEIN OLIGOSACCHARIDES. CAPALYZES
THE ADDITION OF N-ACCTYLGLUCOSAMINE IN BETA 1-4 LINKEDS CAPALYZES
THE ADDITION OF N-ACCTYLGLUCOSAMINE IN BETA 1-4 LINKEDS CAPALYZES
THE ADDITION OF N-ACCTYLGLUCOSAMINE IN BETA 1-4 LINKEDS UGAR
CHAINS. IT IS ONE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE
CHAINS. IT IS ONE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE
REGULATION OF THE BIOSYNTHESIS OF GLYCOPROTEIN OLIGOSACCHARIDES.
-1-CATALYTIC ACTIVITY: UDP-N-ACCTYL-DEJANINE + N-ACCTYL-BETA-D-
GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 3-(N-ACCTYL-BETA-D-
GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 3-(N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 3-(N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-1, 2-ALPHA-D-MANNOSYL-1, 3-(N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-1, 2-ALPHA-NANNOSYL-1, 4-N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 6)-(N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 2-ALPHA-D-MANNOSYL-1, 4-N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 4-N-BETA-D-GLUCOSAMINYL-1, 4-N-ACCTYL-BETA-D-GLUCOSAMINYL-1, 4-N-BETA-D-GLUCOSAMINYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-GLUCOSAMINYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-GLUCOSAMINYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANNOSYL-1, 4-N-BETA-D-MANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FKUM NO...
STRAIN-129/SV; TISSUE-Liver;
MEDLINE-96069598; PubMed-7590346;
Bhaumik M., Seldin M.F., Stanley P.;
"Cloning and chromosomal mapping of the
"Cloning and rovitransferase III.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNT3_MOUSE STANDARD; PRT; 536 AA.

Q10470; P70386;
Q10470; P70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DOMAIN
DOMAIN
CARBOHYD
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CARBOHYD
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    oligosaccharides appears dispensable for viability and Glycobiology 7:45-56(1997).

-I- FUNCTION: IT IS INVOLVED IN THE REGULATION OF THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Priatel J.J., Sarkar M., Schachter H., Marth J.D.; "Isolation, characterization and inactivation of the the bisecting N-acetylglucosamine in asparagine-linke
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-97214999; PubMed-9061364;
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STRAIN-129/SVJ; TI
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Mammalia; Eutheria;
NCBI_TaxID=10090;
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DOMAIN
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Rodentia;
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PRO-RICH.
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N-LINKED (GLCNAC.
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       NIShikawa A., Ihara Y., Hatakeyama M., Kangawa K., Taniguchi N.;
"Purification, CDNA cloning, and expression of
UDP-N-acetylglucosamine: beta-D-mannoside
beta-1.4N-acetylglucosaminyltransferase III from rat kidney.";
J. Biol. Chem. 267:18199-18204(1992).

-I. FUNCTION: IT IS INVOLVED IN THE EEGULATION OF THE BIOSYNTHESIS AN
BIOLOGICAL FUNCTION OF GLYCOPROTEIN OLIGOSACCHARIDES. CATALYZES
THE ADDITION OF N-ACETYLGLUCOSAMINE IN BETA 1-4 LINKAGE TO THE
BETA-LINKED MANNOSE OF THE MOST IMPORTANT ENZYMES INVOLVED IN THE
REGULATION OF THE BIOSYNTHESIS OF GLYCOPROTEIN OLIGOSACCHARIDES.
-I. CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLUCOSAMINE + N-ACETYL-BETA-D-
-I. CATALYTIC ACTIVITY: UDP-N-ACETYL-D-GLUCOSAMINE + N-ACETYL-BETA-D-
                                                                                                                                                                                                                                                                             BETA-1,4-MANNOSYL-GLYCOPROTEIN BETA-1,4-N-ACETYLGLUCOSAMINYL-TRANSFERASE (EC 2.4.1.144) (N-GLYCOSYL-OLIGOSACCHARIDE-GLYCOPROTEIN N-ACETYLGLUCOSAMINYLTRANSFERASE III) (N-ACETYLGLUCOSAMINYLTRANSFERASE III) (GMT-III) (GLCNAC-T III).

MGAT3 OR GNT3.
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Q02527;
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01-FEB-1994 (Rel. 28, Last sequence up
01-OCT-1996 (Rel. 34, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                       STRAIN-DONRYU; TISSUE-Kidney;
MEDLINE-92388193; PubMed-1325461;
                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chor
Mammalia; Eutheria; Rode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
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                                                                                                                                                                                               SEQUENCE FROM N.A.,
                                                                                                                                                                                                                            NCBI_TaxID=10116
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U66844; AAC53064.1; ALT_INIT.
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5; Conser
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Rodentia;
                                                                                                                                                                                                  AND SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74.5%;
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N-LINKED (GLCNAC...) (
N-LINKED (GLCNAC...) (
I -> V (IN 129/SVJ).
D -> G (IN 129/SVJ).
T -> P (IN 129/SVJ).
S -> E (IN 129/SVJ).
S -> E (IN 129/SVJ).
A -> V (IN 129/SVJ).
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Matches
Schmitt I., Epplen J.T., Riess O.;

Predominant neuronal expression of the gene responsible for dentatorubral-pallidoluysian atrophy (DRPLA) in rat.";

Hum. Mol. Genet. 4:1619-1624(1995).

1- TISSUE SPECIFICITY: PREDOMINANT NEURONAL EXPRESSION, ALTHOUGH MARKEDLY REDUCED AMOUNTS ARE FOUND IN MOST OTHER TISSUES.

1- DEVELOPMENTAL STAGE: SIMILAR EXPRESSION AT ALL DEVELOPMENT STAGES (DAY 14.5 P.C., 17.5 P.C., NEWBORNS AND ADULTS).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-OCT-1996
01-OCT-1996
30-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
TISSUE-Cerebellum, and Striatum;
MEDLINE-97317138; PubMed-9173996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalla; Eutheria; Rodentia;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                          TISSUE=Brain, Cerebellum, Hippocampus, and MEDLINE=96081227; PubMed=8541849;
                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Loev S.J., Margolis R.L., Young Ashworth R.G., Ross C.A.; "Cloning and expression of the r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last Sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
ATROPHIN-1 (DENTATORUBRAL-PALLIDOLUYSIAN ATROPHY PROTEIN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CARBOHYD
SEQUENCE
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                                                            DB 1;
                                                                                                                                                                        Length 1183;
                                          Indels
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Search con Job time: completed: June 13, 2001, 14:21:48 ne: 808 sec

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968 GGLALQPG 975

Les Blonk (USDIO)

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  protein search, using sw
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1: sp_archea:*
2: sp_bacteria
3: sp_fundi:*
4: sp_human:*
5: sp_inverteb
6: sp_manmal:*
7: sp_mac:*
8: sp_organel:
9: sp_phage:*
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Match
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14:
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47
1 GGLCVQPG 8
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Copyright (c) 1993 - 2000 Compugen Ltd
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sp_bacteria:*
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Q9Y5W5
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                                                         Q9uhf1 homo sapien
Q9w6f8 xenopus lae
Q9y5w5 homo sapien
Q9wal mus musculu
Q9w6f9 brachydanio
O75851 homo sapien
Q9j1r0 mus musculu
O75543 homo sapien
Q9p0w3 homo sapien
Q9p0w3 homo sapien
Q9p0w3 homo sapien
Q9p0w5 homo sapien
O94xt5 mus musculu
O94106 pneumocysti
O94104 pneumocysti
O13051 homo sapien
Q9r195 mus musculu
O9r192 mus musculu
O60413 homo sapien
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561	532	532	531	509	509	498	498	497	488	487	466	461	433	433	424	414	386	380	378	373	357	300	268	241	225
4					11	13	11	13	11	11	11	13					13							13	4
Q9P2A9	090490	Q02780	Q9UH32	Q90925	P70250	Q90927	Q635 <b>7</b> 3	Q9PS99	Q64192	Q63783	P70251	Q90928	Q91522	Q13050	Q13052	Q9PSA0	Q90929	Q63784	Q61960	053253	Q63785	P95220 .	070190	Q90926	Q12857
Q9p2a9 homo sapien	Q9qy90 rattus norv	Bum	homo sa	gall	mus mu	Q90927 gallus gall	rattus n	xenopus	Q64192 mus sp. nfi		P70251 mus musculu	Q90928 gallus gall	xenopu	homo	3	xenopu	Q90929 gallus gall	rattus	Q61960 mus musculu	O53253 mycobacteri	Q63785 rattus norv	⋾	O70190 rattus norv	Q90926 gallus gall	Q12857 homo sapien

## ALIGNMENTS

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RESULT
Q9W6F8
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Best Local Similarity
Thes 7; Conserve
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Q9UHF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

Sheppard P., Jelinek L., Whitmore T., Blumberg H., Lehner J.,

AN O'Hara P.;

AN O'Hara P.;

Submitted (SEP-1999) to the EMBL/GenBank/DDBJ databases.

REMBL; AF186111; AAF01429.1; -.

REMBL; AF186111; AAF01429.1; -.

REMBL; AF186111; AAF01429.1; -.

REMBL; AF186111; AAF01429.1; -.

REMBL; AF186111; --

REMBL; AF18611; --

REMBL; AF186111; --

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Q9UHF1;
01-MAY-2000 (TrEMBLrel. 1
01-MAY-2000 (TrEMBLrel. 1
01-OCT-2000 (TrEMBLrel. 1
NOTCH4-LIKE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhin1; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZNEU1
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                                                                                                                                                                 114 GGSCVQPG
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                                           N
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87.5%;
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Last sequence update)
Last annotation update)
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RESULT
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Best Local S
Matches 7
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HSSP; P00740; 1EDM.
INTERPRO; IPR000561; -.
INTERPRO; IPR002049; -.
INTERPRO; IPR002049; -.
                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PROVOCALL EGFLAMINIAN.

PRINTS; PROVOCALL EGF_1; UNKNOWN_5.

PROSITE; PS00126; EGF_2; 5.

PROSITE; PS01186; EGF_2; 5.

Ponneat; EGF-11ke domain; Signal; Developmental protein.

Ponneat; EGF-11ke domain; Signal; Developmental protein.
                                                                                                                                                                                      DISULFID
  Q9Y5W5
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SIGNAL
CHAIN
DOMAIN
DOMAIN
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DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
WAY INHLBITORY FACTOR 1 PRECURSOR (WNT INHIBITORY FAC
WIF1 OR WIF-1.
Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BE INVOLVED IN MESODERM SEGMENTATION.

BE INVOLVED IN MESODERM SEGMENTATION.

1- TISSUE SPECIFICITY: DURING SOMATOGENESIS, EXPRESSED PREDOMINANTLY IN UNSEGMENTED PARAXIAL PRESOMITIC MESODERM AND, TO A MUCH LESSER EXTENT, IN NEWLY SEGMENTED SOMITES.

1- DEVELOPMENTAL STAGE: FIRST EXPRESSED AT NEURULA STAGES.

1- SIMILARITY: CONTAINS 5 EGF-LIKE DOMAINS.

EMBL, AF123924; AAAD25404.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.

MEDLINE-99215557; PubMed-10201374;
Hsieh J.-C., Kodjabachian L., Rebbert
Smallwood P.M., Samos C.H., Nusse R.,
"A new secreted protein that binds to
activities.";
Nature 398:31-436(1999).
                                                       216
                                                                                                                                                                                                                                                                                                                                                        DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8355;
                                                                           1 GGLCVQPG 8
                       ω
                                                      GGLCVTPG
                                                                                                Similarity
7; Conserv
                                                                                                 Conservative
  PRELIMINARY;
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                                                                                                                                                                 41071
                                                                                                            87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12, Created)
12, Last sequence update)
15, Last annotation update)
PRECURSOR (WNT INHIBITORY FACTOR-1) (WIF-1).
                                                                                                                                                      W.
                                                                                                0;
                                                                                                        Score 41;
Pred. No.
                                                                                                                                                                                                                                                                                              WNT INHIBITO
EGGF-LIKE 1.
EGGF-LIKE 2.
EGGF-LIKE 3.
EGGF-LIKE 4.
EGGF-LIKE 4.
EGGF-LIKE 1.
EGGF-LIKE 5.
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PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                     E26F973B0F00ACF8 CRC64;
                                                                                              Mismatches
379
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                                                                                                                      DB 13;
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                                                                                                                  Length 374;
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; Pipidae;
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RESULT
Q9WUA1
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Best Local Similarity
Matches 7; Conser
    Q9WUA1

Q9WUA1

Q1-NOV-1999 (TrEMBLrel. 12, Created)

Q1-NOV-1999 (TrEMBLrel. 12, Last sequence update)

Q1-CCT-2000 (TrEMBLrel. 15, Last annotation update)

Q1-CCT-2000 (TrEMBLrel. 15, Last annotation update)

Q1-CCT-2000 (TrEMBLrel. 15, Last annotation update)
                                                                                                                                                                                                                  DOMAIN
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
DOMAIN
WIF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Repeat; EGF-like SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hsieh J.-C., Kodjabachian L., Rebbert M.L., Rattner Smallwood P.M., Samos C.H., Nusse R., David I.B., Na "A new secreted protein that binds to Wnt proteins a activities.";
Nature 398:431-436(1999).
-!- FUNCTION: BINDS TO WNT PROTEINS AND INHIBITS THE BE INVOLVED IN MESODERM SEGMENTATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00022; EGF_1; PROSITE; PS01186; EGF_2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BE INVOLVED IN MESODERM
-|- SIMILARITY: CONTAINS 5 E
EMBL; AF122922; AAD25402.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE=99215557; PubMed=10201374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1999 (TIEMBLICE). 12, Created)
01-NOV-1999 (TIEMBLICE). 12, Last Sequence update)
01-CCT-2000 (TIEMBLICE). 15, Last annotation update)
WMT_INHIBITORY FACTOR 1 PRECURSOR (WNT_INHIBITORY F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00011; EGFLAMININ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF00008; EGF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q9Y5W5;
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                                                                                                                     221
                                                                                                                              OR
                                                                                                                    GGLCVTPG
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                                                                                                                                                                                                               326
379
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                                                                                                                    228
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87.5%;
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                                                                                                                                                                                                                   MW.
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                                                                                                                                                          Score 41; DB Pred. No. 4.3; 0; Mismatches
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EGF-LIKE 1.
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EGF-LIKE 3.
EGF-LIKE 4.
EGF-LIKE 5.
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                                                                                                                                                                       DB . 3;
                                                                                                                                                                                 4.
                                                                                                                                                                                 Length 379;
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      FACTOR-1) (WIF-1).
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S and inhik
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RESULT
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Best Local Similarity 87.3
Matches 7; Conservative
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SEQUENCE FROM N.A.
MEDLINE-99215557; PubMed-10201374;
Hsieh J.-C., Kodjabachian L., Rebbe
Smallwood P.M., Samos C.H., Nusse R
                                                                                                                                                                                                                                                                                                                                                                                REPREAT; ESIGNAL CHAIN DOMAIN DOMAIN DOMAIN DOMAIN DOMAIN DOMAIN DOMAIN DOMAIN DISULFID DISUL
                                                                                                                                    Q9W6F9;
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Nature 398:431-436(1999).
Brachydanio rerio (Zebrafish)
Eukaryota; Metazoa; Chordata;
Actinopterygii; Neopterygii; T
                                                  01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
WNT INHIBITORY FACTOR 1 PRECURSOR (WNT INHIBITORY FACTOR-1) (WIF-1).
WIF1 OR WIF-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00022; EGF_1; UNKNOWN_5.
PROSITE; PS01186; EGF_2; 4.
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Mammalia; Eutheria;
NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FUNCTION: BINDS TO WAT I
BE INVOLVED IN MESODERM
TISSUE SPECIFICITY: EXP
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                                                                                                                                                                                                                                                      GGLCVQPG
                                                                                                                                                                                                                                     GGLCVTPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EGF-like domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PR00011
                                                                                                                                                                                                                                                                                                                                                                              326
379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
198
209
214
230
241
246
262
273
                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                      228
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; EGFLAMININ
                                                                                                                                                                                                                                                                                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                  41590
                                                                                                                                                                                                                                                                                                                   87.2%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DDERM SEGMENTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EXPRESSION HIGHEST IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Signal; Developmental protein.
                                                                                                                                                                                                                                                                                                                                                                                  ₹.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EGF-LIKE DOMAINS
                                                                                                                                                                                                                                                                                                Score 41; DB Pred. No. 4.3; 0; Mismatches
                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WNT INHIBITO
EGF-LIKE 1.
EGF-LIKE 2.
EGF-LIKE 3.
EGF-LIKE 4.
EGF-LIKE 5.
POTENTIAL.
 ) (Zebra danio).
; Craniata; Vert
Teleostei; Eute
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rebbert M.L., I
lusse R., Dawid :
binds to Wnt pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                  E3765F2642B2BC9A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INHIBITORY FACTOR 1.
                                                                                                                                                   378
   Euteleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INHIBITS
                Vertebrata;
                                                                                                                                                   ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ., Rattner A., id I.B., Nathans J.; proteins and inhibits
                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                  1;
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                                                                                                                                                                                                                                                                                                                                 Length 379;
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                                                                                                                                                                                                                                                                                                    Indels
                  Euteleostomi;
 Ostariophysi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTIVITIES.
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RROCOODD DA A D
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075851
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Best Local S
Matches 6
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SEQUENCE FROM N.A.

MEDLINE=99215557; PubMed=10201374;

Hsieh J.-C., Kodjabachian L., Rebbert M.L., Rattner A.,

Hsieh J.-C., Kodjabachian L., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos C.H., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos R., Nusse R., Dawid I.B., Nathans J.;

Smallwood P.M., Samos R., Nusse R., Dawid I.B., Nathans R., Nusse R., 
                                                                                                                       075851;
01-NOV-1998 (
01-NOV-1998 (
01-OCT-2000 (
                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFID
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DOMAIN
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DOMAIN
DOMAIN
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SIGNAL
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ZFIN; ZDB-GENE-990712-17; wifl.
INTERPRO; IPR000561; -.
INTERPRO; IPR002049; -.
                                                                                                      01-NOV-1998 (Tremblrel. 08, 01-NOV-1998 (Tremblrel. 08, 01-OCT-2000 (Tremblrel. 15, WUGSC:H_DJ0751H13.1 PROTEIN
                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                 075851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00022; EGF_1; PROSITE; PS01186; EGF_2; Repeat; EGF-11ke domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- SIMILARITY: CONTAINS 5 |
EMBL; AF122925; AAD25405.1;
HSSP; P00740; 1EDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- FUNCTION: BINDS TO WNT PROT
BE INVOLVED IN MESODERM SEC
-!- TISSUE SPECIFICITY: HIGHLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cypriniformes; Cyprinidae; Rasborinae; Danio.
NCBI_TaxID=7955;
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PFAM; PF00008; EC PRINTS; PR00011;
                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                      1 GGLCVQPG 8
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GGLCMSPG 226
                                                                                                                                                                                                                                                                                                                                                         Similarity 6; Conser
                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EGF;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3788
3788
3788
3388
3388
33188
                                                     Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TO WNT PROTEINS AND INHIBITS THEIR ACTIVITIES. MESODERM SEGMENTATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                41312
                                                                                                                                                                                                                                                                                                                                                                          .0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                      Last sequence up
Last annotation
(FRAGMENT).
                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                         Score 39; DB Pred. No. 10; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WNT INHIBITO
EGF-LIKE 1.
EGF-LIKE 2.
EGF-LIKE 3.
EGF-LIKE 4.
EGF-LIKE 5.
                                                   Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EXPRESSED
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                                                                                                                                                                                               4123
                                                                                                                                                                                                                                                                                                                                                                      . 10;
                                                                    Vertebrata;
                                                                                                                                                                                               A
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                                                                                                                                         update)
                                                     Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                          13;
                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                          Length 378;
                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                         Gaps
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Strowmatt C.

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RESULT OF THE RE
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Best Local S
Matches 6
                                                                                                                                                      Mus musculus (Mouse)
Eukaryota; Metazoa; (Mammalia; Eutheria; NCBI_TaxID-10090;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS0002;
PROSITE; PS00196;
PROSITE; PS00225;
PROSITE; PS00280;
PROSITE; PS01209;
PROSITE; PS01209;
PROSITE; PS01209;
PROSITE; PS01068;
                Goutebroze L., Brault E., Muchardt C., Camonis J., Thomas G.; "Cloning and Characterization of SCHIP-1, a Novel protein Interacting Specifically with Spliced Isoforms and Naturally Occurring Mutant NF2 Proteins.";

Proteins.";

Mol. Cell. Biol. 20:1699-1712(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                3234
                                                                                                                  SEQUENCE FROM N.A. TISSUE-BRAIN;
                                                                                                                                                                                                                                                  01-OCT-2000 (TrEMB
SCHIP-1 (FRAGMENT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PFAM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INTERPRO;
INTERPRO;
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INTERPRO;
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INTERPRO;
INTERPRO;
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INTERPRO;
INTERPRO;
INTERPRO;
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NON_TER
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"The seq
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Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
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                                                                                                                                                                                                                                                                                                                                                                                                                                              GAICVQPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGLCVQPG
Cell. Biol.
AF145716; A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00754; F5_F8_type_C; PF01826; TIL; 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF0005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 75. 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (JUN-1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (JUN-1998)
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                                                                                                                                                                                                                                                                  (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4123 AA;
                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                (Mouse)
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. 20:1699-1712(2000).
AAF34244.1; -.
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LDLRA_1; 9.
LDLRA_2; 20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COPPER_BLUE; UNKNOWN_1.
CRYSTALLIN_BETAGAMMA; UNKNOWN_1.
BPTI_KUNITZ; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EGF_1; UNKNOWN_1
                                                                                                                                                                                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      434985 MW;
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75
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Last sequ
Last anno
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Pred. No.
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                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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                                                                                                                                                                                                                                                                  sequence update)
annotation update)
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                                                                                                                                                                                                                                                                                                                                                368
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96;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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Q9POW3
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AC Q9
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Homo sapiens (Human)
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
NCBI_TaxID=9606;
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Q9POW3;
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SCHIP-1-D241/253:
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01-NOV-1998
01-AUG-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical protein.
NON_TER 1
SEQUENCE 381 AA; 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (JUN-1998) to the EMBL; AF070614; AAC25386.1;
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"A 'double adaptor'
construction.";
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SEQUENCE
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Yu W., Gibbs R.A.;
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Mammalia; Eutheria;
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s (Human).
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Metazoa; Primates; C
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Pred. No.
               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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un library
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SEQUENCE FROM
TISSUE-BRAIN;
Gobron S.;
Submitted (OCT-1998) to the EMBL/GenBank/DDBJ EMBL; Y08560; CAA69867.1; -.
                                                                                                                                                                                                                             Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
Bovidae; Bovinae; Bos.
NCBI_TaxID=9913;
                                                                                                                                                                                                                                                                                                                                                                                                   01-JUL-1997 (TrEMBLrel 04, 01-JAN-1999 (TrEMBLrel 09, 01-OCT-2000 (TrEMBLrel 15, SCO-SPONDIN (FRAGMENT).
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"Cloning and Characterization of SCHIP-1, a Novel Protein Interacting Specifically with Spliced Isoforms and Naturally Occurring Mutant NF2 Proteins.";
MOI. Cell. Biol. 20:1699-1712(2000).
EMBL: AF145713; AAF34241.1;
EMBL: AF145713; AAF34241.1;
SEQUENCE 487 AA; 53479 MW; 86F86EDD64A475BF CRC64;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID-9606;
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01-OCT-2000 (TrEMBLrel.
01-OCT-2000 (TrEMBLrel.
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EMBL; AF145715; AAF34243.1; ".
SEQUENCE 474 AA; 52079 MW; 5C4EF8E1867A78F9 CRC64;
                                                                                                                                  SEQUENCE FROM N.A.
TISSUE-SUBCOMMISSURAL ORGAN;
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    OR PTTM
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Best Local S
Matches
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Best Local Similarity
Matches 6; Conser
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INTERPRO; IPRO00884; -.

INTERPRO; IPRO01846; -.

INTERPRO; IPRO01846; -.

INTERPRO; IPRO02172; -.

INTERPRO; IPR002465; -.

INTERPRO; IPR002465; -.

INTERPRO; IPR002919; -.

PFAM; PF00090; tsp_l; 1.

PFAM; PF00090; tsp_l; 1.

PFAM; PF001826; TIL; 2.

PFAM; PF001826; TIL; 2.

PROSITE; PR00261; LDLRECEPTOR_CYTOKINES_2; UN

PROSITE; PS01209; LDLRA_1; 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=C.B. VAN NIEL ATH 2.3.1,
STRAIN=C.B. VAN NIEL ATH 2.3.1,
Larimer F.W., Lu T.-Y.S., Buley
FASEB J. 9:0-0(1997).
EMBL: U23145; AAB82054.1; -.
INTERPRO; IPRO00792; -.
PFAM; PF00196; GerE; 1.
PEAM; PF00196; GerE; 1.
SEQUENCE 250 AA; 27505 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             O33515;
O1-JAN-1998 (TrEMBLrel. (
O1-JAN-1998 (TREMBLrel. (
O1-JUN-2000 (TREMBLrel. )
HYPOTHETICAL PROTEIN.
                                                                              O9QXT5
O9QXT5;
O1-MAY-2000
O1-MAY-2000
O1-OCT-2000
NOTCH4-LIKE
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NON_TER 87
Mus musculus (Mouse).
Eukaryota; Metazoa; (
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rhodobacter capsulatus (Rhodopseudomonas capsulata)
Bacteria; Proteobacteria; alpha subdivision; Rhodob
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                                                               ZNEU1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=1061;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS50068; LDLRA_2;
                                                                                                                                                                                                                                                                                         138 GLCAOPG
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Chordata;
Rodentia;
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85
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, Buley
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Last sequence update)
Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                             Score 37; Pred. No.
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Pred. No.
Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                     PRT;
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17;
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Best Local S
Matches 5
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PRINTS; PR00301; HEATSHOCK70.

PROSTTE; PS00229; HSP70_1; UNKNOWN_1.

PROSITE; PS00329; HSP70_2; 1.

PROSITE; PS00329; HSP70_2; 1.

PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                           "Identification, characterization, and exprended and continuous co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 094106;
                                                                                                                                                               PROSITE; PS01036; HSP70_3;
Heat shock.
NON_TER 645 645
SEQUENCE 645 AA; 70884 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY 1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
HEAT SHOCK PROTEIN 70 (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE-97045128; Pubmed-8890193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stedman T.T., Buck G.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pneumocystis carinii f. sp. carinii.
Eukaryota; Fungi; Fungi incertae sedis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PFAM; PF00008; EGF; 2.
PROSITE; PS01022; EGF 1; UNKNOWN_1.
PROSITE; PS01186; EGF_2; UNKNOWN_1.
PROSITE; PS01187; EGF_CA; 1.
SEQUENCE 278 AA; 30125 MW; 863159F567102FA7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Presnell S., Gilbert T., Whitmore T., Martinez T., Hoffman R., O'Hara P.; Submitted (SEP-1999) to the EMBL/GenBa EMBL, AF184973; AAF01322.1; -. HSSP; P00740; LEDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=38081;
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Sheppard P., Jelinek L., Whitmore T., Blumberg H.,
O'Hara P.;
                                                                                                                                                                                                                                                                                                                                                                          INTERPRO; IPRO01023
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GGLCVQPG 8
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Similarity 62.5%;
5; Conservative
                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                          645
70884 MW;
                                                               76.6%;
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                                       ; Score 36; DB; Pred. No. 62; 0; Mismatches
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                                                                                                                                                            6D8CF90433BB163F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and expression of the BiP peronins in Pneumocystis carinii.";
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                                                               DB 3;
62;
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                                         Indels
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094104;
01-MAY-1999
01-MAY-1999
01-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                     NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Phylogeny and sequence analysis of Pneumocystis carinii HSP70."; Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases. EMBL; U71151; AAD09565.1; -. HSSP; P19120; 3HSC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PFAM; PF00012; HSP70; 1.
PRINTS; PR00301; HEATSHOCK70.
PROSITE; PS00297; HSP70_1; UNKNOWN_1.
PROSITE; PS00329; HSP70_2; 1.
PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.
PROSITE; PS01036; HSP70_3; 1.
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Eukaryota; Fungi; Fun
Pneumocystis.
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Paul S.P., Graves D.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
HEAT_SHOCK PROTEIN 70 (FRAGMENT).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 leat shock.
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                                                                                                                                                 GGACSQPG 630
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71176 MW;
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Pred.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /ggn2_6/ptodata/2/1aa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/backfiles1.pep:*
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 US-08-975-114A-4
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US-08-185-809A-125
US-08-185-432-17
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US-08-185-432-19
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US-08-48-1104A-1
US-08-481-104A-1
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US-08-975-114A-4
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GENERAL INFORMATION:
            Query Match
Best Local Similarity
Matches 5; Conserv
                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/975,114A
FILING DATE: No. 5876714ember 20, 1997
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/107,173
FILING DATE: AUGUST 17, 193
ATTORNEY/AGENT IMPORMATION:
NAME: Lee Cheng
                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                         TYPE: amino a STRANDEDNESS: TOPOLOGY: lin MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Atsushi NISHIKAWA et al.
TITLE OF INVENTION: HUMAN GLYCOSYLTRANSFERASE
TITLE OF INVENTION: COMPOUNDS AND METHOD FOR I
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                               REGISTRATION NUMBER: 40,949
REFERENCE/DOCKET NUMBER: 1:F
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-721-8200
TELEPAX: 202-721-8250
                                                                                                                                                                      SEQUENCE CHARACTERISTICS: LENGTH: 531 amino acid residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 2033 K St
CITY: Washington
STATE: D.C.
COUNTRY: U.S.A.
ZIP: 20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                       amino acid
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                   Conservative
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US-08-457-135-2
US-08-457-934-4
US-08-9147-009-7
US-08-445-042-4
US-08-942-6862-2
US-07-728-215-32
US-08-445-000-16
US-08-483-199-16
US-08-483-199-16
US-08-681-812-2
US-09-188-930-306
US-08-881-812-2
US-09-188-930-306
US-08-461-859-35
                               Score 35;
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Suite 800
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                                                                                                                                   Sequence 5, Application US/08975114A Patent NO. 5876714 GENERAL INFORMATION: APPLICANT: Atsushi NISHIKAWA et a
                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 5; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NTTORNEL/NUMBER: 40,949
NAME: Lee Cheng
REGISTRATION NUMBER: 40,949
REFERENCE/DOCKET NUMBER: 97-0529*/LC(MJ)/1
REFERENCE/DOCKET NUMBER: 97-0529*/LC(MJ)/1
TELECOMMUNICATION INFORMATION:
TOT.EPHONE: 202-721-8200
                                                                                           ATTLE OF INVENTION: HUMAN GLYCOSYLTRANSFERASE GENE, NIMBER OF INVENTION: COMPOUNDS AND MERTING.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Wordperfect 5.1 CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                 NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                             112 GGVCFKPG 119
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CITY: Washington
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                               STREET:
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                               Wenderoth, Lind & Ponack, L.L.P
33 K Street, N.W., Suite 800
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N: 514
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                                                                                                      COMPOUNDS AND METHOD FOR INHIBITING CANCEROUS METASTASIS
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Pred. No. 1.4e+02
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                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/08849281A Patent No. 6153433
                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 202-721-8200 TELEFAX: 202-721-8250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/975,114A
FILING DATE: No. 5876714ember 20, 1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/107,173
FILING DATE: August 17, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: MS-D
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
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NAME: Lee Cheng
REGISTRATION NUMBER: 40,
                                                                                                         FILING DATE: May 30, CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                        SOFTWARE: Wordperfect 5.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: 1
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                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Eiji MIYOSHI et al.
TITLE OF INVENTION: INHIBITOR FOR VIRAL REPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112 GGVCFKPG 119
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                                                                             APPLICATION NUMBER: FILING DATE:
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                         NAME: Lee Cheng
REGISTRATION NUMBER: 40,949
                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                          COMPUTER:
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                REFERENCE/DOCKET NUMBER:
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N: 514
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               97-0529*/LC(MJ)/1
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Pred. No. 1.4e+02;
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US-08-859-931A-4
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Best Local Similarity bz...
Similarity bz...
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence 4, Application US/08859931A Patent No. 5945510
                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 536 amino acid residues
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                        TELEFAX: (202) 293-78
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 20 amino acids
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/859,931A FILING DATE: 21 MAY 1997 CLASSIFICATION: 514 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                      TELEPHONE: (202) 293-7060
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CORRESPONDENCE ADDRESS:
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112 GGVCFKPG 119
                                                                                                                                                                           LENGTH: 20 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                          Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: A-6901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
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                            1 GGLCVQPG 8
GGVLVQPG 15
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202-721-8250
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                                                          Conservative
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                                                                                                                                               NO peptide
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                                                                        72.3%;
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                                                                      Score 34; DB 2;
Pred. No. 8.7;
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Pred. No. 1.4e+02;
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                                                                                        Length 20;
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US-08-545-809A-125
                                                                                                                                                                                                                                                                                           US-09-347-819-8
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FILING DATE: 27-MAR-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP93/00603
FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Freeman, John W.
REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 06501/00400:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Microsoft Office 97
                                                                            APPLICANT: Cahoon, Rebecca E.
APPLICANT: Rafalski, J. Antoni
APPLICANT: Falco, S. Carl
TITLE OF INVENTION: Ornithine Biosynthesis Enzymes
FILE REFERENCE: BB-1174 C
CURRENT APPLICATION NUMBER: US/09/347,819
CURRENT FILING DATE: 1999-07-02
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APPLICANT: Honjo, Tasuku
APPLICANT: Mesuda, Fumihiko
APPLICANT: Mesuda, Fumihiko
TITLE OF INVENTION: HUMAN IMMUNOGLOBULIN VH GENE
TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
                                  EARLIER APPLICATION NUMBER: 60/093,209
EARLIER FILING DATE: July 17, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatibl
OPERATING SYSTEM: Windo
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SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
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LENGTH: 118 amino acids
TYPE: amino acid
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ADDRESSEE: Fish & Richardson, P.C.
STREET: 225 Franklin Street '
                                                                                                                                                                                                                                                                                                                                                                          27 GGVVVQPG 34
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Best Local
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Best Local Similarity 83...
Matches 5; Conservative
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NFORMATION FOR SEQ ID NO: 17:
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1120 GGLCVDAG 1127
                                                                                                                                                                                                                                                      NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 73:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
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ORGANISM: Glycine max
                                                                                                                                          MOLECULE TYPE: protein
                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 2556 amino aci
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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                                                       Local Similarity hes 6; Conserv
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                            1 GGLCVQPG 8
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                                                       Conservative
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                                                                     72.3%;
75.0%;
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DELTEX PROTEINS, NUCLEIC ACIDS, AND
ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS
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                                             Score 34; DB 1; Pred. No. 9.1e+02; Indels
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Pred. No.
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                                                                                 Length 2556;
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RESULT 10
US-08-532-384-20
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TELEPAX: 212 8698864/9741
TELEEX: 66141 PENNIE
INFORMATION FOR SEO ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 2556 amino acids
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FORM PC COMPATIBLE
COMPUTER: PATENTIAL PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/083,590A
FILING DATE: 25-JUN-1993
CLASSIFICATION: 435
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 73
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212 790-9090
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                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: TITLE OF INVENTION:
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TITLE OF INVENTION:
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                                                                                                                                                  STATE: New COUNTRY: U. ZIP: 10036
                                                                                                                                                                                                                                                                                                                                                                                                         UMBER OF SEQUENCES:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                         ADDRESSEE: Pennie & Edmonds
STREET: 1155 Avenue of the Americas
                                                                                                                                                                                                                                                              CITY: New York
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                                                                                                                                                                                New York
Y: U.S.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08532384
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Artavanis-Tsakonas, S. et al.
VENTION: Therapeutic And Diagnostic Methods
VENTION: And Compositions Based On No. 6083904ch Proteins And
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Artavanis-Tsakonas, S. et al. WENTION: Therapeutic And Diagnostic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
       PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic Acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      And Compositions Based On No. 5786158ch Proteins And
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7326-015
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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Best Local
                      APPLICATION UNBER: US/08/434,702
FILING DATE: 04-MAY-1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 08/271,883
FILING DATE: 07-JUL-1994
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 07/687,466
FILING DATE: 18-APR-1991
PRIOR APPLICATION DATA:
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 08/083
FILING DATE: 25-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: MISTOCK, S. Leslie
REGISTRATION NUMBER: 18/87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 212 8698864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 20
                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1120 GGLCVDAG 1127
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: ENTITLE OF INVENTION: US NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 212 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Bennett,
APPLICANT: Fischer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Lashbrook, Coralie APPLICANT: Glovanni, James
                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
nes 6; Conserv
                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                       STREET: One Market | CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
STRANDEDNESS: sir
              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GGLCVQPG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
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                                                                                                                                                                                                                                                                                                                                       California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2556 amino acids
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Fischer, Robert L.
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BER: US 07/511,417
0-APR-1990
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Pred. No. 9.
                                                                                                                                                                                                                 Version #1.30
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Query Match
Best Local Similarity
Watches 6; Conserva
                                                                                                   ; MOLECULE TYPE: US-08-545-809A-108
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Best Local Similarity
"hehes 6; Conserve
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                                                                                                                                                                                                  TELEPHONE: 617-542-507
TELEFAX: 617-542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (415) 543-50
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                     NAME: Freeman, John W.
REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 06
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/01 FILING DATE: 27-MAR-1996 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM Compatible
OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Honjo, Tasuku
APPLICANT: Matsuda, Fumihiko
TITLE OF INVENTION: HUMAN IMMUNOGLOBULIN VH GENE
TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CO
NUMBER OF SEQUENCES: 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 02
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                           FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   327 GGLIVKPG 334
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/JP93/00603 FILING DATE: 10-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: US
ZIP: 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 225 |
CITY: Boston
                                                                                                                                     TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Bastian, Kevin L. REGISTRATION NUMBER: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                                                                                                                                                   LENGTH:
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o. 6096878
                                                                                                                                                  amino acids
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amino acid
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225 Franklin Street
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                                                                                                                                     linear
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                                                                                                                  protein
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75.0%;
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                                                                                                                                                                                                                                                                                           06501/004001
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Pred. No. 2.
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2.7e+02
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Conservative

68.1%; 75.0%;

Score 32; DB 3; Pred. No. 1e+02; 0; Mismatches

2; Indels Length 118;

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GGLCVQPG 8

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Best Local Similarity
6; Conserve
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US-08-428-197-38
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                                                                                                                                                                                                                                         PCT-US93-10555-38
                                                                                                                                                                                           Sequence 38, Application PC/TUS9310555 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No. 5891438
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/US
APPLICATION NUMBER: PCT/US
FILING DATE: 29-OCT-1993
ATTORNEY/AGENT INFORMATION:
NAME: Howells, Stacy L.
REGISTRATION NUMBER: 34.84
REGISTRATION NUMBER: 34.84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: MET
TITLE OF INVENTION: VAC
TITLE OF INVENTION: VAC
TITLE OF INVENTION: THE
NUMBER OF SEQUENCES: 51
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (619) 455-5110 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: FD TELECOMMUNICATION INFORMATION: TELEPHONE: (619) 455-5100
                                                                TITLE OF INVENTION: METHOD FOR STIMULATING PRODUCTION OF TITLE OF INVENTION: VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH TITLE OF INVENTION: VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES TITLE OF INVENTION: THEREOF NUMBER OF SEQUENCES: 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 123 amino acid
                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
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                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Spensley Horn Jubas & Lubitz STREET: 1880 Century Park East - Suite 500 CITY: Los Angeles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 123 amino acids TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                          ADDRESSEE:
                                                                                                                                                                                                                                                                                                                         8 GGTLVQPG 15
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R: Spensley Horn Jubas & Lubitz
1880 Century Park East - Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SILVERMAN, GREGG J.

SILVERMAN, GREGG J.

VENTION: METHOD FOR STIMULATING PRODUCTION OF

VENTION: VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH

VENTION: VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
                                                                                                                                                                            SILVERMAN, GREGG J.
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75.0%;
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Pred. No. 1.1e+0
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APPLICATION NUMBER: US/08/651,999A
FILING DATE: MAY 23, 1996
ATTORNEY/AGENT INFORMATION:
NAME: ELIZABETH A. BOGOSIAN
REGISTRATION NUMBER: 39,911
REFERENCE/DOCKET NUMBER: 96700/395
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 697-5995
TELEPHONE: (212) 697-5995
TELEFAC: TWX 710-581-4766
INFORMATION FOR SED ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08651999A Patent No. 6031088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION: APPLICANT: Stefan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (619) 455-5110
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 123 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: HOWELL,
REGISTOR NUMBER: 34,842
REFERENCE/DOCKET NUMBER: FD
TELECOMMUNICATION INFORMATION:
(619) 455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 90067
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH 1.44 Mb STORAGE
MEDIUM TYPE: DISKETTE
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                       SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 29-OCCCLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                    STREET: 90 PARK AVENUE CITY: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                   COUNTRY: U.S.A. ZIP: 10016
                                                                                                                                                                                                                                           OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
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amino acid
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California
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                                                                                                                                                                                                                                                                                                                                                                       NEW YORK
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stefan Somlo and Toshio Mochizuki
/ENTION: POLYCYSTIC KIDNEY DISEASE PKD2 GENE
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75.0%;
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Pred. No. 1
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1.1e+02;
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LENGTH: 866 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE:
DESCRIPTION: peptide
HYPOTHETICAL: NO
FRAGMENT TYPE: internal fragment
US-08-651-99A-1

Query Match
Best Local Similarity 75.0%; Pred. No. 6.8e+02;
Matches 6; Conservative 0; Mismatches 2; Indels 0; Gaps

Qy 1 GGLCVOPG 8

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Db 44 GGLCEORG 51

Search completed: June 13, 2001, 14:16:36

Job time: 497 sec
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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
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length: 2000000000
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Match
  100.0
93.5
89.1
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82.6
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2: /SIDS6/gcgdata/geneseq/geneseqp/AA1981.DAT:*
3: /SIDS6/gcgdata/geneseq/geneseqp/AA1982.DAT:*
4: /SIDS6/gcgdata/geneseq/geneseqp/AA1983.DAT:*
5: /SIDS6/gcgdata/geneseq/geneseqp/AA1983.DAT:*
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Gapop 10.0 , Gapext 0.5
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/SIDS6/gcgdata/geneseq/geneseqp/AA1990_DAT: *
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                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                   DB
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Y79122
Y79118
Y36831
Y79121
Y79126
Y79126
R20006
R85198
R85200
R85199
Y79117
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                                                                                     Amino acid sequenc
Peptide antagonist
Peptide antagonist
Peptide antagonist
Zonula occludens t
                                                                                                                                                                                                                                                                                Description
                 Avenacinase-like p
Avenacinase-like p
                                                                                                                                                                                                         Peptide antagonist Peptide antagonist
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	Y82215 Y52689 Y52984 Y52984 W61562 Y79120 W88384 B55858 B57649 B58059	21 21 21 21 22 22 22	745 745 745 745 1487 31 48 48	73.9 73.9 73.9 73.9 71.7 71.7 71.7 71.7		444410 5443
Feline zona pelluci Feline zona pelluci Human secreted pro Transforming growt Human zona pelluci Human zona pelluci Human zona pelluci Human zona pelluci	Y521/3 Y52977 B40159 W09406 R74094 R55206 Y42480 W81817	21 11 20 20	716 360 342 745 745	~~~~~~~~~		200000000000000000000000000000000000000
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Peptide antagonis Peptide antagonis Canine zona pellu	Y79124 Y79106 R60101 R55198 Y42471 W81808 Y82206 Y52680 Y52171	21 21 20 20 21 21	713 713 715 715 715 715 715		& & & & & & & & & & & & & & & & & & &	113 114 115 116 117 118

## ALIGNMENTS

RESULT Y79122

05-JUN-2000 (first entry)

Peptide antagonist of zonulin.

Y79122;

Y79122 standard; Peptide; 8

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Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic;
                  WPI; 2000-205565/18
                                                        (UYMA-) UNIV MARYLAND BALTIMORE
                                                                            03-AUG-1998;
                                                                                               28-JUL-1999;
                                                                                                                   17-FEB-2000
                                                                                                                                     WO200007609-A1.
                                                                                                                                                         Synthetic.
                                                                                                                                                                            gastrointestinal inflammation; therapy.
                                                                            98US-0127815
                                                                                                99WO-US16683
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New peptide antagonist of zonulin useful as antiinflammatory agent for

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Y PRX F PXX
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Best Local Similarity
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                     (UYMA-) UNIV MARYLAND BALTIMORE
                                                                03-AUG-1998;
                                                                                                                                                                                                         WO200007609-A1
                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                 gastrointestinal
                                                                                                                                                                                                                                                                                                                           blood-brain barrier; antiinflammatory; cerebroprotective; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic; antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor
                                                                                                             28-JUL-1999;
                                                                                                                                                                                                                                                                                                                       hypotensive;
                                                                                                                                                                                                                                                                                                                                                                                                     Zonulin; antagonist; zonula occludens toxin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y79118 standard;
                                                                                                                                                            17-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 gglcvqdg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1; Page 46; 69pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                               immunosuppressive; antiparasitic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lupus
                                                                98US-0127815.
                                                                                                             99WO-US16683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   erythematosus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
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Pred. No. 3.2e+05;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                    vasotropic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoldosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                          recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigeilosis, viral gastroenteritis, meningitis, encephalomyelitis
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 45; 69pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fasano A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      one of 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      They can be prepared by chemical synthesis or by use of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is that of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           zonulin
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RESULT
Y36831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                     Vaccine; eye disease; conventional trachoma; nonendemic trachoma; paratrachoma; inclusion conjunctivitis; genital disease; perihepatitis; nongonococcal uretritis; epidymitis; cervicitis; salpingitis;
04-NOV-1998;
                                                                                                                         Chlamydia trachomatis.
                             27-NOV-1998;
                                                                                           W09928475-A2
                                                                                                                                                                                                                                                                 07-OCT-1999 (first entry)
                                                            10-JUN-1999
                                                                                                                                                        bartholinitis;
                                                                                                                                                                                                                                  Amino acid sequence of a Chlamydia trachomatis protein.
                                                                                                                                                                                                                                                                                                  Y36831;
                                                                                                                                                                                                                                                                                                                               Y36831 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGLCVQDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                           1 ggvcvqdg
                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                      pneumopathy;
98US-0107077
                             98WO-IB01939
                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93.5%;
                                                                                                                                                                                                                                                                                                                               196
                                                                                                                                                   venereal lymphogranulomatosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 43; DB 21;
Pred. No. 3.2e+05;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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RESULT
Y79121
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         v36754-v37949 are encoded by open reading frames (ORFs) of the genome of Chlamydia trachomatis (see 201425). The polypeptides can be used as vaccines against Chlamydia trachomatis. Antisense and ribozyme sequences can also be used to control growth of the microorganism. Chlamydia trachomatis is responsible for a large number of diseases, e.g. eye diseases such as conventional trachoma, nonendemic trachoma, and inclusion conjunctivitis; genital diseases such as nongonococcal uretritis, epidymitis, cervicitis, salpingitis, perihepatitis, barthollnitis; pneumopathy in breast feeding infants; and venereal lymphogranulomatosis. The polypeptides of the invention
New peptide antagonist of zonulin useful as antiinflammatory agent for treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis -
                                                                                           03-AUG-1998;
                                                                                                                                                                   Synthetic
                                                                                                                                                                                  gastrointestinal inflammation; therapy
                                                                                                                                                                                                                                 2onulin;
                                                                                                                                                                                                                                                                    05-JUN-2000 (first entry)
                                                                                                                                                                                                                                                                                                       Y79121 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome sequence of Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-371125/31.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-NOV-1997;
17-DEC-1997;
                                                                                                                               17-FEB-2000
                                                                                                                                                 WO200007609-A1
                                                                                                                                                                                            antibacterial; cytostatic; anti-HIV; vulnerary;
hypotensive; immunosuppressive; antiparasitic; v
                                                                                                                                                                                                              neuroprotective; dermatological; antiulcer; antiviral;
                                                                                                                                                                                                                        blood-brain barrier;
                                                                                                                                                                                                                                                  Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                      479121;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                         (UYMA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GEST ) GENSET
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     be of
                                     2000-205565/18
                                                                                                                                                                                                                                                                                                                                                    ggycvqdg 157
                                                                                                                                                                                                                                                                                                                                                                      GGLCVQDG 8
                                                                                                                                                                                                                                                                                                                                                                                        Similarity
7; Conser
                                                                                                                                                                                                                                antagonist; zonula occludens toxin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    use in treating these diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                   196 AA;
                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 710-711;
                                                                         MARYLAND BALTIMORE
                                                                                           98US-0127815.
                                                                                                             99WO-US16683.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97FR-0015041.
97FR-0016034.
                                                                                                                                                                                                                                                                                                       Peptide; 8
                                                                                                                                                                                                                                                                                                                                                                                              89.1%;
87.5%;
                                                                                                                                                                                                                       antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1755pp;
                                                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                                                                                                                                                                                                                                     Score 41; DB pred. No. 10; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                      cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                        20;
                                                                                                                                                                                                                                                                                                                                                                                      1.
                                                                                                                                                                                                                                                                                                                                                                                                        Length 196;
                                                                                                                                                                                                   antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                      0;
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                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                    RESULT
Y79110
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                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                           Query Match
                           (UYMA-) UNIV
                                             03-AUG-1998;
                                                                                 17-FEB-2000
                                                                                                   WO200007609-A1
                                                                                                                     Synthetic
                                                                                                                                                                                                    Peptide antagonist of zonulin.
                                                                                                                                                                                                                      05-JUN-2000
                                                                                                                                                                                                                                         Y79110
                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1;
                                                              28-JUL-1999;
                                                                                                                                                                                                                                                         Y79110
                                                                                                                                                                                                                                                                                                                                         Local Similarity nes 7; Conserv
                                                                                                                                                                                                                                                                                                      μ
                                                                                                                                                                                                                                                                                                                        1 GGLCVQDG
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                                                                                                                                                                                                                                                                                                      gglcvqpg
                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 46;
                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                      8
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intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastrittis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonists are based on a final control of the peptide antagonist of zonulin control of zonulin contro
lymphatic obstruction, e.g. congenital intestinal lymphangiectasia sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TJ). The peptide antagonists are based on a common motif of 20T and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant has techniques who worked a second to be considered.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an
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Conservative 84.8%; 0; Score Pred. Mismatches 39; No. DB .2e+05; 21; Length 8; Indels 0 Gaps 0

(first entry) Peptide; 8

Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotect: neuroprotective; dermatcological; antiucer; antiviral: antibacterial; cytostatic; anti-HIV; vulnerary; antia-hypotensive; immunosuppressive; antiparasitic; vasotrgastrointestinal inflammation; therapy. cerebroprotective; vasotropic; antiallergic;

99WO-US16683

98US-0127815

MARYLAND BALTIMORE

WPI;

2000-205565/18

New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis

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RESULT
Y79126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, entercolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 1; Page 42; 69pp; English
                                                                                                                                                                                                                                                                                                                                                                        Y79126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases
03-AUG-1998;
                                                                    17-FEB-2000
                                                                                                       WO200007609-A1
                                                                                                                                          Synthetic
                                                                                                                                                                           gastrointestinal inflammation;
                                                                                                                                                                                                            neuroprotective; dermatological; antiulcer; antiviral
antibacterial; cytostatic; anti-HIV; vulnerary; antia
                                                                                                                                                                                                                                                                                                Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                   05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                       Y79126 standard; Peptide; 8 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (20T) receptor, yet do no
                                 28-JUL-1999;
                                                                                                                                                                                        hypotensive; immunosuppressive; antiparasitic;
                                                                                                                                                                                                                                                 blood-brain barrier;
                                                                                                                                                                                                                                                                 Zonulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GGLCVQDG 8
| |||||||
1 grlcvqdg 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human zonulins, which is be ding. They can be prepared
                                                                                                                                                                                                                                                                                                                                                                                                                                          σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        systemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
7; Conserv
                                                                                                                                                                                                                                                               antagonist; zonula occludens toxin receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA;
 98US-0127815
                                  99WO-US16683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82.6%;
87.5%;
                                                                                                                                                                                                                                                 antiinflammatory; cerebroprotective;
                                                                                                                                                                                                            anti-HIV; vulnerary; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 38; DB Pred. No. 3.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                           therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 21;
3.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                receptor, yet do not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases e.g. systemic lupus erythematosus or food allergies, primarily to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1; Page 48; 69pp; English.
          05-JUN-1990;
                                                                         05-JUN-1991;
                                                                                                                                                                                                                                                                                          Vibrio cholerae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31-MAR-1992 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R20006 standard; Protein; 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     correction of congenital heart disease with Fontan's operation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                shigellosis, viral gastroenteritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-205565/18
                                                                                                                                                                                                                    WO9118979-A.
                                                                                                                                                                                                                                                                                                                                                            ZOT; cholera; vaccine; enterotoxin; diarrhoea
                                                                                                                                                                                                                                                                                                                                                                                                                                 Zonula occludens toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New peptide antagonist of zonulin useful as antiinflammatory agent
                                                                                                                                              12-DEC-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and human zonulins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treating cerebral ischemia, stroke,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYMA-) UNIV MARYLAND BALTIMORE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GGLCVQDG 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gggcvqdg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The peptide antagonists are based on a common man zonulins, which is believed to be critical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   They can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
          90US-0533315
                                                                            91WO-US03812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           be prepared
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 38;
Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cerebral edema, gastritis,
meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.2e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for receptor or by use of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        motif of ZOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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Best Local S
Matches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    officacy in protecting humans against subsequent infection with a strain of a similar serotype and avoid undesirable side effects such as diarrhoea, nausea and cramping. Cultures of these strains may be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The amino acid sequence is that of the zonula occludens toxin (ZOT). It may be responsible for diarrhoea in some strains of cholera and the ZOT gene or fragments of it are deleted from strains of Vibrio cholerae (V.c.) to be used as vaccines. These V.c. strains have 1008
                                                                         New isolated saponin glycosyl hydrolase enzymes - used to develop prods. for the modification of microbial organisms and plants or
                                                                                                                                                                                                                                                            WO9530009-A2
                                                                                                                                                                                                                                                                                 Gaeumannomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1992-007465/01.
N-PSDB; Q20185.
                                          Claim 2; Fig 4c;
                                                                                                                                              Bowyer P, Daniels MJ,
                                                                                                                                                                                           29-APR-1994;
                                                                                                                                                                                                                                       09-NOV-1995
                                                                                                                                                                                                                                                                                                         avenacinase;
                                                                                                                                                                                                                                                                                                                     saponin glycosyl
                                                                                                                                                                                                                                                                                                                                        Avenacinase - a saponin glycosyl hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                             R85198 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             used for prodn. of vaccines against cholera.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New Vibrio cholerae strains - fragment encoding toxin, used
                                                                                                                                                                     (GATS-) GATSBY CHARITABLE FOUND.
                                                                                                                                                                                                                17-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                  25-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (UYMA-) UNIV MARYLAND BALTI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     291 grlcvqdg 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GGLCVQDG
                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                              1995-393080/50.
DB; T06022.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         399 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baudry-Maurelli B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fig 18; 83pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                        deglycosylation;
                                                                                                                                                                                                                                                                                                                                                               (first entry)
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                                                                                                                                                                                           94GB-0008573.
                                                                                                                                                                                                                                                                                 graminis var. avenae
                                                                                                                                                                                                                95WO-GB00592
                                                                                                                                                                                                                                                                                                    hydrolase; tomatinase; plant pathogenic fungi; lycosylation; pore formation; cell death.
                                         113pp;
                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.6%;
                                          English.
                                                                                                                                             Osbourn AE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 38;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       comprise restriction endonuclease as vaccines against cholera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fasano
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
62;
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Avenacinase is a saponin glycosyl hydrolase (SGH) encoded by T06022, isolated from the plant pathogenic fungi Gaeumannomyces graminis var avenae. Avenacinase detoxifies the triterpenoid saponin avenacin A-1

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RESULT
R85200
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Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                found in oat roots, by hydrolytic cleavage of the beta, 1-2 and beta, 1-4 linked terminal glucose mol. to give sequentially the monoand bis-deglucosylated forms, both of which are substantially less toxic to fungal growth than avenacin A-1 itself. This deglycosylation is sufficient to destroy the ability of the saponin to complex with membrane sterols. Saponinysterol complexes in eukaryotic membranes results in pore formation and leakage of cell contents, with subsequent cell death. The DNA and proteins of the invention are useful in identification of related enzymes, structural studies of saponins and also for development of agents which can modulate SGH activity, e.g. for reducing pathogenicity of SGH-producing pathogens for specific hosts.
give sequentially the mono- and bis-deglucosylated forms, both of which are substantially less toxic to fungal growth than avenacin A-1 itself. This deglycosylation is sufficient to destroy the ability of the saponin to complex with membrane sterols. Saponin/sterol complexes in eukaryotic membranes results in pore formation and leakage of cell contents, with subsequent cell death. The DNA and proteins of the invention are useful in identification of related enzymes, structural studies of saponins and also for development of agents which can modulate SGH activity, e.g. for
                                                                                                                                  The saponin glycosyl hydrolase (SGH) designated avenacinase-like protein is encoded by 706024, and was isolated from the plant pathogenic fungi Gaeumannomyces graminis var. tritici. Avenacinase detoxifies the triterpenoid saponin avenacin A-1 found in oat roots, by hydrolytic triterpenoid saponin avenacin A-1 found in oat roots, by hydrolytic cleavage of the beta, 1-2 and beta, 1-4 linked terminal glucose mol. to
                                                                                                                                                                                                                                         Claim 2; Fig 4e; 113pp; English.
                                                                                                                                                                                                                                                                           New isolated saponin glycosyl hydrolase enzymes - used prods. for the modification of microbial organisms and plant prods.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         avenacinase;
                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-393080/50
                                                                                                                                                                                                                                                                                                                                                                                                                                 (GATS-) GATSBY CHARITABLE FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-MAR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaeumannomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           saponin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Avenacinase-like
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      glycosyl hydrolase; tomatinase; plant pathogenic fungi; nase; deglycosylation; pore formation; cell death; ss.
                                                                                                                                                                                                                                                                                                                                                                                               Daniels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         792
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       graminis var. tritici
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94GB-0008573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95WO-GB00592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein; 793 AA.
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85
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    37;
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1.7e+02;
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                                                                                                                                                                                                                                                                                           to develop
plants or
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fungi
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pathogenicity of SGH-producing pathogens for specific hosts.

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RESULT
R85199
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Avenacinase-like protein is a saponin glycosyl hydrolase (SGH) encoded CC by T06023, isolated from the plant pathogenic fungi Gaeumannomyces CC graminis var graminis. This enzyme has action like that of avenacinase CC (R85198) which detoxifies the triterpenoid saponin avenacin A-1 found in CC cat roots, by hydrolytic cleavage of the beta, 1-2 and beta, 1-4 linked CC terminal glucose mol. to give sequentially the mono- and biscot deglucosylated forms, both of which are substantially less toxic CC to fungal growth than avenacin A-1 itself. This deglycosylation is Sufficient to destroy the ability of the saponin to complex with membrane sterols. Saponin/sterol complexes in eukaryotic membranes results in pore formation and leakage of cell contents, with subsequent cell death. The CC but and proteins of the invention are useful in identification of related cenzymes, structural studies of saponins and also for development of CC agents which can modulate SGH activity, e.g. for reducing pathogenicity CC of SGH-producing pathogens for specific hosts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   reducing
                                                                                                                                                                                                                                                                                     New isolated saponin glycosyl hydrolase enzymes - used to develop prods. for the modification of microbial organisms and plants or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaeumannomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     avenacinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Avenacinase-like protein - a saponin glycosyl hydrolase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R85199;
                                                                                                                                                                                                                                          Claim 2; Fig 4d; 113pp; English.
                                                                                                                                                                                                                                                                                                                                                                            Bowyer P,
                                                                                                                                                                                                                                                                                                                                                                                                         (GATS-) GATSBY CHARITABLE FOUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17-MAR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W09530009-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R85199 standard;
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| 89 glclqdg 95
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6; Conservative
                                                                                                                                                                                                                                                                                                                                                                            Daniels MJ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   deglycosylation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      graminis var. graminis
                                                                                                                                                                                                                                                                                                                                                                                                                                      94GB-0008573.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "unidentified residue, represented by
full stop in the specification"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hydrolase; tomatinase; plant pathogenic fungi; lycosylation; pore formation; cell death.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein; 793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "unidentified residue, represented by full stop in the specification"
                                                                                                                                                                                                                                                                                                                                                                            Osbourn AE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 37;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 16; Le.
1.7e+02;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 793;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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RESULT 11
Y79117
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SS
recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                    This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
                                                                                                                                                                                                                                                                                                                                                                                                                                                  New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotect neuroprotective; dermatological; antiulcer; antiviral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y79117 standard; Peptide; 8 AA.
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                                                                                                                                                                                                                                                              (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of
                                                                                                                                                                                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gastrointestinal inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
hypotensive; immunosuppressive; antiparasitic; vasotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYMA-) UNIV MARYLAND BALTIMORE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6;
                                                                                                                                                                                                                                                                                                                                                                                                                   Page 45; 69pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 793 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 37; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cerebroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 16; Length 793;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .7e+02;
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Y79124
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Best Local
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                                  (2) one of 25 such peptides (see vi9105-29) of the invention, which bind to a zonula occludens toxin (207) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of 207 and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the 207 receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to milk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral; antibacterial; cytostatic; anti-fit; vulnerary; antiallergic; hypotensive; immunosuppressive; antiparasitic; vasotropic; gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                Claim 1; Page 47; 69pp;
                                                                                                                                                                                                                                                                                                                New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200007609-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
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               treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection,
                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-205565/18
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYMA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-AUG-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zonulin; antagonist; zonula occludens toxin receptor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antagonist of zonulin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                              sequence is that of a peptide antagonist of zonulin 25 such peptides (see Y79105-29) of the invention,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    MARYLAND BALTIMORE
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75.0%;
                                                                                                                                                                                                                                                                                  English
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Pred. No. 3.2e+05;
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Matches 7
             This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y7915-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lymphatic obstruction, e.g. congenital intestinal lymphanglectasia sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  neuroprotective; dermatological; antiulcer; antiviral antibacterial; cytosmatic; anti-HIV; vulnerary; antia hypotensive; immunosuppressive; antiparasitic; vasotr gastrointestinal inflammation; therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by
                                                                                                                                                                                       Claim 1; Page 41;
                                                                                                                                                                                                                     New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                               03-AUG-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                             28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide antagonist of zonulin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Y79106 standard; Peptide; 8 AA.
                                                                                                                                                                                                                                                                                                                                               (UYMA-) UNIV MARYLAND BALTIMORE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   conulin;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tagonist; zonula occludens toxin barrier; antiinflammatory; cerek
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                               98US-0127815
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                                                                                                                                                                                       69pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 78.3%;
87.5%;
                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 36;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cerebroprotective;
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3.2e+05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; antiallergic;
vasotropic;
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the intestine of TJ in the
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RESULT
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Matches 6
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. gastrifts, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliage disease, eosinophilic gastroenteritis, and immune diseases, eos gasteric lume expression of conditions and correction of congenital heart disease with fontan's operation.
                                                                                                   The CZP2 DNA (Q70072) was prepd. by the cloning of CZP2(75-520) - Q81700 using the primers given in Q70073-74, CZP2(1-65) - Q81804 using the primers given in Q70082-83, CZP2(42-103) - Q81803 using the primers given in Q70079-81 and CZP2(487-713) - Q81957 using the primers given in Q70075-78.
                                                                       Sequence
                                                                                                                                                                                          Claim 1; Page 8-10; 10pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                    JP06189766-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Canis familiaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Canine zona pellucida CZP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R60101;
                                                                                                                                                                                                                     New DNA sequence encoding canine zona pellucida CZP2 - the prodn. of a canine contraceptive vaccine antigen
                                                                                                                                                                                                                                                                                                               (TOFU ) TONEN CORP.
                                                                                                                                                                                                                                                                                                                                                                         25-DEC-1992;
                                                                                                                                                                                                                                                                                                                                                                                                      12-JUL-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Canine; dog; zona pellucida; ZP; CZP2; contraceptive; vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R60101 standard; Protein; 713
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nes 6; Conserv
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DB; Q70072.
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Similarity
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             76.1%;
75.0%;
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75.0%;
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            Score 35;
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Pred. No. 3.2e+05;
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Mismatches
               3.4e+02;
                           DB 15;
                          Length 713;
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                                         Query Match
Best Local Similarity
Matches 6; Conser
                                                                                                                                                   A commercially available 16 week old canine ovarian cDNA expression library in lambda gtl1 was screened using antibodies raised against heat solublised canine zona pellucida. The largest candidate clone was used to rescreen the library and to isolate clones which were
                                                                                                                              used as probes
canine ZPA and
                                                                                                                                                                                                           Claim 40;
                                                                                                                                                                                                                                                                                                                                                     09-NOV-1992;
29-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Key
                                                                                                Sequence
                                                                                                                                                                                                                                          Use of zona pellucida proteins and antibodies – for inducing reproducible transient infertility or permanent sterility in
                                                                                                                                                                                                                                                                            N-PSDB;
                                                                                                                                                                                                                                                                                      WPI; 1994-183156/22
                                                                                                                                                                                                                                                                                                           Harris JD,
                                                                                                                                                                                                                                                                                                                                                                                     06-NOV-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Canis familiaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Dog; canine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Canine zona pellucida 2PA protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-JAN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R55198;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R55198 standard; Protein; 715 AA
                                                                                                                   respectively).
                                                                                                                                                                                                                                 female mammals
                                                                                                                                                                                                                                                                                                                                (ZONA-) ZONAGEN
                                                                                                                                                                                                                                                                                                                                                                                                           26-MAY-1994
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 366
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                     1 GGLCVQDG 8
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gdlctqdg 373
                                                                                                                                                                                                                                                                            Q65608
                                                                                                                                                                                                          Page 88-90; 154pp; English
                                                                                                715
                                           Conservative
                                                                                                                                                                                                                                                                                                           HSu KT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zona pellucida;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                   in Southern hybridisations. Sequences coding for ZPC proteins were obtained (Q65608 and Q65609, R55198 is the deduced amino acid sequence for ZP)
                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                    92US-0973341.
93US-0012990.
                                                                                                                                                                                                                                                                                                                                 INC
                                                                                                                                                                                                                                                                                                                                                                                     93WO-US10851.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= canine_ZPA
                                                    76.1%;
75.0%;
                                                                                                                                                                                                                                                                                                           Podolski JS
                                          0
                                                    Score 35; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZPA; immunocontraception
                                           Mismatches
                                                    DB 15;
3.4e+02;
                                                             Length 715;
                                          Indels
                                                                                                                      for ZPA
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Minimum
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maf protein TC0628
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71.7	71.7	71.7	71.7	71.7	71.7	71.7	71.7	71.7	71.7	72.8	73.9	73.9	73.9	73.9	73.9
362	362	274	266	256	243	172	161	142	115	704	2108	1548	1492	1487	1031
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S40092	S37220	F75161	S71025	T16805	T34190	S27022	S61389	S50662	A46279	A48040	н70819	S34583	A40333	CGHU6C	T06130
fiber protein - hu	fiber protein - hu	homoserine kinase	lipopolysaccharide	hypothetical prote	hypothetical prote	fibroblast growth	small basic protei	hypothetical prote	guanylin precursor	meprin A (EC 3.4.2	probable polyketid	serine proteinase	collagen alpha 1′(	collagen alpha 1(I	hypothetical prote

## ALIGNMENTS

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A; Gene: TC0628
C; Superfamily:
                                                                                                                                                                               R;Read, T.D.; Brunham, R.C.; Shen, C.; Gill, S.R.; Heidelberg, J.F.; White, O.; Hicke, C.; Dodson, R.; Gwinn, M.; Nelson, W.; DeBoy, R.; Kolonay, J.; McClarty, G.; Salzbe, Nucleic Acids Res. 28, 1397-1406, 2000.
A;Title: Genome sequences of Chlamydia trachomatis MoPn and Chlamydia pneumoniae AR39 A;Reference number: A81500; MUID:20150255
A;Accession: H81681
                                                                                                                                                                                                                                                                                                                                      maf protein TC0628 [imported] - Chlamydia muridarum (strain Nigg)
C;Species: Chlamydia muridarum, Chlamydia trachomatis MoPn
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 19-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein CT349 - Chlamydia trachomatis (serotype D, strain UW3/Cx) C;Species: Chlamydia trachomatis C;Date: 13-Sep-1998 #sequence_revision 13-Sep-1998 #text_change 08-Oct-1999 C;Accession: F71525
                                            A; Experimental source: C; Genetics:
                                                                                       A; Molecule type: DNA
A; Residues: 1-196 <TET>
A; Cross-references: GB:
                                                                                                                                      A;Status: preliminary A;Molecule type: DNA
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A;Molecule type: DNA
A;Residues: 1-196 <ARN>
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A;Title: Genome sequence of
A;Reference number: A71570;
A;Accession: F71525
                                                                                                                                                                                                                                                                                                                        C; Accession: H81681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Gene: CT349
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:AE001308; GB:AE001273; NID:g3328766; PIDN:AAC67944.1; PID:g332
A;Experimental source: serotype D, strain UW-3/Cx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                               GB:AE002331; GB:AE002160; NID:g7190662; PIDN:AAF39457.1; PID:g719
ce: strain Nigg (MoPn)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          an obligate intracellular pathogen of humans: Chlamydia t. {\tt MUID:99000809}
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Pred. No. 1.2;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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septum

formation

protein

maf

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Notch homolog Motch protein - mouse (fragment) C; Species: Mus musculus (house mouse) C; Date: 01-Dec-1993 #sequence_revision 18-Nov-
                                                         RESULT
A48825
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                                                                                                                                                                                                                                                                                                                                                                                                 R;Baudry, B.; Fasano, A.; Ketley, J.; Kaper, J.B. Infect. Immun. 60, 428-434, 1992
A;Title: Cloning of a gene (zot) encoding a new ta;Reference number: A43864; MUID:92112300
A;Accession: A43864
                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M83563; NID:g155314; PIDN:AAA27582.1; PID:g155315
A;Note: sequence extracted from NCBI backbone (NCBIN:77488, NCBIP:77491)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C:Species: Vibrio cholerae
C:Date: 10-Mar-1993 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999
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Best Local Similarity
"hes. 7; Conserve
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A;Map position: 1
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A;Accession: B82197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Heldelberg, J.F.; Elsen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J. chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, l, R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Vibrio cholerae
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 15-Sep-2000
C;Accession: B82197
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A; Residues: 1-399 <BAU>
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A; Residues: 1-399 <HEI>
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                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 7; Conserv
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#sequence_revision 18-Nov-1994 #text_change 13-Aug-1999
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87.5%;
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87
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87
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Pred. No. 9
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Pred. No.
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C;Superfamily: unassigned ankyrin repeat pro
E;106-138/Domain: EGF homology <EGF1>
F;144-175/Domain: EGF homology <EGF2>
F;22-254/Domain: EGF homology <EGF2>
F;261-292/Domain: EGF homology <EGF2>
F;339-370/Domain: EGF homology <EGF3>
F;416-449/Domain: EGF homology <EGF3>
F;456-487/Domain: EGF homology <EGF3>
F;456-487/Domain: EGF homology <EGF3>
F;494-525/Domain: EGF homology <EG06>
F;532-63/Domain: EGF homology <EG06>
F;537-788/Domain: EGF homology <EG07>
F;682-713/Domain: EGF homology <EG08>
F;757-88/Domain: EGF homology <EG09>
F;757-88/Domain: EGF homology <EG09>
F;795-826/Domain: EGF homology <EG01>
F;795-826/Domain: EGF homology <EG11>
F;911-942/Domain: EGF homology <EG11>
F;949-980/Domain: EGF homology <EG13>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: mRNA
A; Residues: 1551-2108, 'Q', 2110-2114, 'ALP', 2118-2170 <FRA>
A: Cross-references: EMBL: 211886
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A; Note: sequence extracted from NCBI back
C; Superfamily: unassigned ankyrin repeat
F; 26-57/Domain: EGF homology <EGF>
F; 64-95/Domain: EGF homology <EGX1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data Library, April 1992
A;Description: Expression pattern of Motch, a mouse homolog of A;Reference number: S25144
A;Accession: S25144
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;del Amo, F.F.; Gendron-Maguire, M.; Swiatek, P.J.; Jenkins, N.A.; Copeland, N.G.; Genomics 15, 259-264, 1993
Genomics 15, analysis, and chromosomal localization of Notch-1, a mouse homologa; Title: Cloning, analysis, and chromosomal localization of Notch-1, a mouse homologa; Reference number: A46019; MUID:93194170
A;Accession: A46019
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N;Alternate names: motch protein
C;Species: Mus musculus (house mouse)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: nucleic acid
A; Residues: 1-2531 <DEL>
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Best Local
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75.0%;
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F;1187-1218/Domain:
F;1233-1264/Domain:
F;1353-1383/Domain:
F;1391-1425/Domain:
F;1391-1425/Domain:
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C:Accession: T47524
C:Accession: T47524
                                                                         R:Weston, K.; Barrell, B.G.
J. Mol. Biol. 192, 177-208, 1986
A;Title: Sequence of the short unique region,
A;Reference number: A92935; MUID:87169717
A;Accession: C27349
A;Molecule type: DNA
A;Residues: 1-788 <WES>
                                                                                                                                                                                HHLF1 protein - human cytomegalovirus (strain AD169)

N;Alternate names: hypothetical protein TRS1
C;Species: human cytomegalovirus, human herpesvirus 5
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 28-Jul-2000
C;Accession: C27349; S09951
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C;Species: Arabidopsis thaliana (mouse-ear cress)
                           A;Cross-references: EMBL:X04650; NID:g59801; PIDN:CAB37121.1; A;Experimental source: strain AD169 R;Chee, M.S.; Bankier, A.T.; Beck, S.; Bohni, R.; Brown, C.M.
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A; Introns: 233/3;
A; Note: F16L2.50
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A;Residues: 1-633 <JOR>
A;Cross-references: EMBL:AL162459
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F;1149-1180/Domain:
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F;1025-1056/Domain:
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F;1983-2015/Domain:
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2049-2081/Domain:
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R;Weston, K.; Barrell, B.G.
J. Mol. Biol. 192, 177-208, 1986
A;Title: Sequence of the short unique region, short repeats, A;Reference number: A92935; MUID:87169717
A;Accession: C26078
Xin protein, stage early embryo - mouse C;Species: Mus musculus (house mouse) C;Date: 20-Sep-1999 #sequence_revision; C;Accession: T14267 R;Wang, D.Z.; Lin, J.J.C. submitted to the EMBL Data Library, Mark
                                                                                                           RESULT
T14267
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Curr. Top. Microbiol. Immunol. 154, 125-169,
A;Title: Analysis of the protein-coding conto
A;Reference number: S09749; MUID:90269039
A;Accession: S09914
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A; Accession: S09951
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A; Residues: 1-846 <WES>
A; Cross-references: EMBL: X04650; NID: 959801; PIDN: CAA28312.1;
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N;Alternate names: hypothetical protein IRS1
C;Species: human cytomegalovirus, human herpesvirus 5
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 16-Jul-1999
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A; Note: this sequence was submitted to the
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A; Residues: 1-788 <CHE>
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Best Local S
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6; Conserv
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A; Gene: mtlD; PA2342
C; Superfamil:
                         A;AGCESSION.
A;Status; preliminary
A;Molecule type: DNA
A;Residues: 1-491 <STO>
A;Cross-references: GB:AE004660; GB:AE004091; NID:g9948372; PIDN:AAG05730.1; GSPDB:GN001
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A;Reference number: Z17948
A;Receasion: T14267
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA

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A:Introns: 45/3; 63/1; 114/3; 143/3; 225/3
C:Superfamily: ribitol dehydrogenase; short-chain alcohol dehydrogenase homology
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                     R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, .: Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mannitol dehydrogenase PA2342 [imported] - Pseudomonas aeruginosa (strain PAO1)
C:Species: Pseudomonas aeruginosa
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                                                                                                                                                                                                                                                                            A; Reference number: A82950; A; Accession: D83353
                                                                                                                                                                                                                                                                                                                                                 A; Title: Complete genome
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:AL031633; PIDN:CAA21012.1; GSPDB:GN00021; CESP:Y39A1A.11
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Best Local Similarity
Matches 6; Conserv
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6; Conser
conserved hypothetical protein YEL070w
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                                                                                                                                                                                                                                                                                                                    sequence of Pseudomonas aeruginosa PA01, an opportunistic path
50; MUID:20437337
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75.0%;
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Pred. No.
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Pred.
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26;
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85;
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A.; Larbig,
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K.; Lim,
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R;Harits, J.D.; Hibler, D.W.; FULL R;Harits, J.D.; Hibler, D.W.; FULL R;Harits, J.D.; Hibler, D.W.; FULL R;Harits, J.D.; Biller, D.W.; FULL R;Harits, J.D.; Biller, D.W.; FULL R;Harits, J.D.; Full R;
                             C; Accession: S70398
                                                    zona pellucida glycoprotein A - cat
C;Species: Felis silvestris catus (domestic cat)
C;Date: 28-Oct-1996 #sequence_revision 27-Feb-1997
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C; Species: Canis lupus familiaris (dog)
C; Date: 28-Oct-1996 #sequence_revision
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R;Senkevich, T.G.; Bugert,
Science 273, 813-816, 1996
A;Title: Genome sequence of
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                                                                                                                                                S70398
                                                                                                                                                                       RESULT
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A; Residues: 1-715 <HAR>
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A; Residues: 1-680 <SEN>
A; Cross-references: EMB
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Best Local Similarity
Matches 6; Conser
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R; Harris,

J.D.;

D.W.; Fontenot, G.K.; Hsu,

K.T.; Yurewicz, E.C.; Sacco,

A.G

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DNA 569, 4, 361-393, 1994
A:TRLES: Cloning and characterization of zona pellucida genes and cDNAs from a variety of Reference number: 870396; MUID:93143578
A:Gecession: 570396; MUID:93143578
A:Status: Preliminary
A:Residues: 1-716 cHaRb
A:Cross-references: EMBI:105776; NID:9458268; PIDN:AAA74388.1; PID:9458269
A:Cross-references: EMBI:105776; NID:9458268; PIDN:AAA74388.1; PID:9458269
C:Superianity: Spear-binding 91ycoprotein 2P2; ZP domain homology
P:370-650/Domain: ZP domain homology cZRH>

Query Match
Best Local Similarity 75.0%; Pred No. 59; Length 716;
Best Local Similarity 75.0%; Pred No. 59; Indels 0; Gaps 0;
Mismatches 6; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
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D 1 GILTOTOG 8
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CA11_CHICK
PCK5_MOUSE
MEPB_MOUSE
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NTE1_MOUSE
FP2_WYTGA
APB3_HUMAN
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         P38442 vibrio chol
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P09695 human cytom
P47983 canis famil
P47984 felis silve
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Q47897 felis silve
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P1752 homo sapien
P17290 oryctolagus
P09810 rattus norv
P1752 mus musculu
P48829 oryctolagus
P09817 rattus norv
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P48829 oryctolagus
P09817 gallus gall
P02457 gallus gall
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P40096 homo sapien
P94669 clostridium
P94699 mus musculu
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TISSUE-Sal94170; PubMed-8449489;
MEDLINE-93194170; Pendron-Maguire
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01-NOV-1995 (Rel. 32, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-OCT-2000 (Rel. 40, Last annotation update)
NEUROGENIC LOCUS NOTCH HOMOLOG PROTEIN 1 PRECURSOR (MOTCH PROTEIN).
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MEDLINE-93048835; PubMed-1425352;
Franco del Amo F., Smith D.E., Swiatek
Greenspan R.J., McMann A.P., Gridley
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VARIANT
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                                                                                                                                                                                                                                           Franco del Amo F., Gendron Copeland N.G., Gridley T.;
                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (Mouse)
Eukaryota; Metazoa; (
Mammalia; Eutheria; 
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(See http://www.isb-sib.ch/announce/ collaboration

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MEDLINE=87169717; PubMed=3031311;
Weston K., Barrell B.G.;
Weston K., Barrell B.G.;
"Sequence of the short unique region,
long repeats of human cytomegalovirus.
J. Mol. Biol. 192:177-208(1986).
                                                                                                                                                                                                                                                                                                                                                                        Human cytomegalovirus (strain AD169). Viruses; dsDNA viruses, no RNA stage; Betaherpesvirinae; Cytomegalovirus. NCBI_TaxID=10360;
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s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way ified and this statement is not removed. Usage by and for commercial
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RESULT 4
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GARBOHYD 76 76
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EMBL; X04650; CAB37121.1; --
PIR; C27349; QQBEE3.
PIR; S09951; S09951.
HSSP; P41249; 1AKP.
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EMBL; X04650; CAA2B312.1;
PIR; C26078; OQBEC3.
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Weston K., Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human cytomegalovirus (strain AD169).
Viruses; dsDNA viruses, no RNA stage;
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email to license@isb-sib.ch).
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InterPro; IPROUISU/;
Pfam; PF00100; zona_pellucida; 1.
PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
Glycoprotein; Signal; Sulfatation;
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DNA Seq. 4:361-393
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Mammalia; Eutheria;
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01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 33, Last annotation update)
ZONA PELLUCIDA SPERM-BINDING PROTEIN 2 PRECURSOR
                                                                                                                                               DOMAIN
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er D.W., Fontenot
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15
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599
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  79938
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85.7%;
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CYTOPLASMIC (POTENTIAL).
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                                                                                                                                             ZONA PELLUCIDA SPERM-BINDI EXTRACELLULAR (POTENTIAL).
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                                                                                                                                                                                         Sperm; Receptor; Transmembrane;
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nd ZPC gene
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  CRC64;
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                                                                             (POTENTIAL)
(POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
Canis.
                                                                   (POTENTIAL)
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01-FEB-1996
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                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                     Okazaki Y., Isojima S., Sugimoto M.;
Submitted (JAN-1995) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: ZP2 FORMS WITH ZP1 AND ZP3 THE ZONA PELLUCIDA,
WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED B
ZP2 ACTS AS A SECONDARY SPERM RECEPTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZP2_FELCA
P47984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Felis silvestris catus (Cat).
Eukaryota; Metazoa; Chordata; (
Mammalla; Eutheria; Carnivora;
                                                                                                           Extracellular matrix.
                                                                                                                               PRINTS; PR00023; ZPELLUCIDA.
PROSITE; PS00682; ZP_DOMAIN; 1.
                                                                                                                                                                           EMBL; U05776; AAA74388.1; -. EMBL; D45067; BAA08095.1; -.
                                                                                                                                                                                                          entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                   <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-Ovary;
                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Seq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=95143578; PubMed=7841460; Harris J.D., Hibler D.W., Fontenot
                                            DOMAIN
                                                         DOMAIN
                                                                   TRANSMEM
                                                                                                  SIGNAL
                                                                                                                      Glycoprotein;
                                                                                                                                                                 InterPro; IPR001507; -
                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZP2 OR ZPA.
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                                                                                                                                                                                                                                                                                                                       SULFATED GLYCOPROTEIN WITH O-LINKED
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(Rel. 33, Last sequence update)
(Rel. 39, Last annotation update)
IDA SPERM-BINDING PROTEIN 2 PRECURSOR
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                                                                                                                     Signal; Sulfatation;
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                                                                                                                                                     zona_pellucida;
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                                                     ZONA PELLUCIDA SPERM-BINDING EXTRACELLULAR (POTENTIAL). POTENTIAL CYTOPLASMIC (POTENTIAL).
                                                                                                 ВΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Fissipedia; Felidae;
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                                                                                                  SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G.K.,
                                                                                                                     Sperm; Receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    na pellucida genes and cDNAs from ZPA, ZPB and ZPC gene families.";
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(POTENTIAL).
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(POTENTIAL).
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                                                                                                                     Transmembrane,
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Felis.
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CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                   CARBOHYD
CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Aspergillus aculeatus.*;

Gene 173:287-288(1996),

Gene 173:287-288(1996),

GLOCATALYTIC ACTIVITY: HYDROLYSIS OF TERMINAL, NON-REDUCIN

GLUCOSE RESIDUES WITH RELEASE OF BETA-D-GLUCOSE.

-!- PATHWAY: CELLULOSE DEGRADATION.

-!- SIMILARITY: BELONGS TO FAMILY 3 OF GLYCOSYL HYDROLASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BGL1_ASPAC
P48825;
                                                                                                                                                                                                                                                                  Pfam; PF00933; Glyco_hydro_3; 1. Pfam; PF01915; Glyco_hydro_3_C; PRINTS; PR00133; GLHYDRLASE3.
                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                             between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This
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01-FEB-1996 (Rel. 33, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
BETA-GLUCOSIDASE 1 PRECURSOR (EC 3.2.1.21) (G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ASPAC
                     CARBOHYD
                                                                                                                                                                                                                                                        PROSITE;
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Ooi T., As
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Fungi; Ascomycota; Pezizomycotina; Eurotiomycetes; Eurotiales; Trichocomaceae; mitosporic Trichocomaceae; Aspergillus.
                                                                                                                                                                                                                                                                                                                                                         EMBL; D64088; BAA10968.1;
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                                                                                                                                                                                                                                                                                                                                       InterPro;
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, Arai M.;
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V -> G (IN REF. 2).
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                                                                                                                                                                                                                                      degradation; Glycoprotein; Signal
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                       This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Extremena Bioinformatics Institute. There are no restructe by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entitles requires a license agreement (See http://www.isb-sor.send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                        Protein
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MEDLINE-94071939; PubMed-8250923;

Tarentino A.L., Plummer T.H. Jr.;

"The first demonstration of a procaryotic glycosylasparaginase.";

Biochem. Biophys. Res. Commun. 197:179-186(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                        meningosepticum glycosylasparaginase: and beta subunits.";
Arch. Browner
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01-NOV-1997 (Rel. 35, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
N4-(BETA-N-ACETYLGLUCOSAMINYL)-L-ASPARAGINASE PRI
(GLYCOSYLASPARAGINASE) (ASPARTYLGLUCOSAMINIDASE)
GLUCOSAMINYL)-L-ASPARAGINE AMIDASE) (AGA).
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STRAIN-ELDER / ATCC 33958;
MEDLINE-95142655; PubMed-7840643;
                                                                                                                                                                                                                                                               "Crystal structure of glycosylasparaginase meningosepticum.";
                                                                                                                                                                                                                                                                                            Guan C.
                                                                                                                                                                                                                                                                                                     Xuan J., Tarentino
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                                                                                                                                       THE GLCAPTOR THE GLCNAC-ASN BOND WHICH JOINS OLIGOSACCHARIDES TO THE PEPTIDE OF ASPARAGINE-LINKED GLYCOPROTEINS. REQUIRES THAT THE GLYCOSYLATED ASPARAGINE MOIETY IS NOT SUBSTITUTED ON ITS AMINO (R1) AND CARBOXYL (R2) TERMINUS.

CATALYTIC ACTIVITY: N4-(BETA-N-ACETYL-D-GLUCOSAMINYL)-L-ASPARAGINE + H(2)O = N-ACETYL-BETA-GLUCOSAMINYLAWINE + L-ASPARTATE.

SUBGUIT: HETERODIMER OF AN ALPHA AND A BETA CHAINS.

SUBCELLULAR LOCATION: PERLPLASMIC.
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Pfam; PF01112; Asparaginase_2;
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III HOMOLOG (EC 4.2.99.18) (DNA-
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InterPro; IPR001502;
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MEDLINE-90332431; PubMed-2377472;
BOULBland S., Darmon M.C., Ganem Y., Launay J.M., Mallet J.;
"Complete coding sequence of human tryptophan hydroxylase.";
"Nucleic Acids Res. 18:4257-4257(1990).
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01-AUG-1990 (Rel. 15, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
TRYPTOPHAN 5-MONOOXYGENASE (EC 1.14.16.4) (TRYPTOPHAN 5-HYDROXYLASE)
TPH OR TRPH.
                                                                                                                                        EMBL; X52836; CAA37018.1;
EMBL; L29306; AAA67050.1;
PIR; S10489; S10489.
HSSP; P04177; 1TOH.
                                                                                                                                                                                                                                                       use by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                        мім; 191060;
                                                                                                                                                                                                                                                                                                                                                                             between
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                                                                                                                                                                                                                                                                                                                       s SWISS-PROT entry is copyright. It is produced through a cycen the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                           HYDROXYLASES FAMILY.
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210 210
217 217
220 220
228 228
355 AA; 40226 N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73.98;
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IRON-SULFUR (4FE-4S) (BY SIMILARITY).
D2EBC93AODFA6OEB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 34; DB
Pred. No. 27;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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and
                                                                                                                                                                                                                                                                             noved. Usage by and for commercial
(See http://www.isb-sib.ch/announce/
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human brain
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RESULT 11
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Best Local :
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01-AUG-1990 (Rel. 15, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
TRYPTOPHAN 5-MONOOXYGENASE (EC 1.14.16.4) (TRYPTOPHAN 5-HYDROXYLASE).
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                                                        Grenett H.E., Ledley F.D., Reed L.L., Woo S.L.C.; "Full-length cDNA for rabbit tryptophan hydroxylase: functio domains and evolution of aromatic amino acid hydroxylases."; Proc. Natl. Acad. Sci. U.S.A. 84:5530-5534(1987).
                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9986;
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METAL
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TISSUE-Brain;
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  COFACTOR: FERROUS ION.

COFACTOR: FERROUS ION.

COFACTOR: FERROUS ION.

STEPOTONIN IN THE CENTRAL NERVOUS SYSTEM AN STEP OF THE SYNTHESIS OF MELATONIN IN THE SUBUNIT: MULTIMER OF IDENTICAL SUBUNITS.

SIMILARITY: BELONGS TO THE BIOPTERIN-DEPEN
                                                                                                                                                                                                                                                                                                                                                GLCKQDG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PS00367; BIOPTERIN_HYDROXYL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       cuniculus (Rabbit).
wetazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                                      STANDARD;
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85.7%;
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E -> D (IN REF. 1)
E -> D (IN REF. 1)
S -> T (IN REF. 1)
L -> S (IN REF. 2)
N -> S (IN REF. 2)
H -> Y (IN REF. 2)
H -> Y (IN REF. 2)
R -> Q (IN REF. 2)
V -> I (IN REF. 2)
V -> I (IN REF. 2)
A -> Y (IN REF. 2)
S -> N (IN REF. 2)
S -> N (IN REF. 2)
R -> Q (IN REF. 2)
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       BIOPTERIN-DEPENDENT AROMATIC
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N (BY SIMILARITY).
N (BY SIMILARITY).
S (IN REF. 1).
N I (IN REF. 1).
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                       N THE BIOSYNTHESIS OF
CATALYZES THE FIRST
INEAL GLAND.
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Best Local Similarity
Matches 6; Conser
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01-OCT-1989
01-NOV-1997
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SEQUENCE OF 167-261 FROM N.A. SEQUENCE OF 167-261 FROM N.A. MEDLINE-87005247; PubMed-2875901; Darmon M.C., Grima B., Cash C.D.,
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                                                           Brain
[3]
                                                                                             Kim K.S., Wessel T.C., Stone D.M., Carve "Molecular cloning and characterization hydroxylase from rat central serotonergi
                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-WISTAR; TISSUE-Pineal gland;
MEDLINE-88244702; PubMed-3379411;
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Mammalia; Eutheria;
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; L29305; AAA670:
PIR; A32699; A32699.
HSSP; P04177; 1TOH.
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InterPro; IPRO02912; -.
Pfam; PF01842; ACT; 1.
Pfam; PF00351; biopterin_H; 1.
                                                                                                                                                      MEDLINE-91245924; PubMed-1645430;
                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                  "Sequence
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                                                                             Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                    9 (Rel. 10, Created)
9 (Rel. 12, Last sequence update)
7 (Rel. 35, Last annotation update)
5-MONOOXYGENASE (EC 1.14.16.4) (TRYPTOPHAN 5-HYDROXYLASE).
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51118 MW;
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                                                                             Brain
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Rodentia;
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85
                                                                           Res.
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                                                                           ne D.M., Carver C.H., racterization of cDNA al serotonergic neuro 9:277-283(1991).
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IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
M -> L (IN REF. 1).
L -> S (IN REF. 2).
KY -> ND (IN REF. 2).
KY -> K (IN REF. 2).
R -> Q (IN REF. 2).
T -> K (IN REF. 1).
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                                                                                                                                                                                                                                V., Ehret M., Maitre M., Mallet active rat tryptophan hydroxylas
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     Maitre
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າ hydroxylase.
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RESULT 13
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Best Local S
Matches 6
MEDLINE-90243261; PubMed-2110547; Stoll J., Kozak C.A., Goldman D.; "Characterization and chromosomal mappi tryptophan hydroxylase from a mouse material commission of the control of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Phosphorylation.

MOD_RES 58

METAL 272

METAL 277

METAL 317
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191532;
101-AUG-1990 (Rel. 15, Created)
101-AUG-1990 (Rel. 15, Last sequence update)
101-NOV-1997 (Rel. 35, Last annotation update)
11-NOV-1997 (Rel. 35, Last annotation update)
11-NOV-1997 (Rel. 35, Last annotation update)
11-NOV-1997 (Rel. 35, Last annotation update)
13-NOV-1997 (Rel. 35, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -I- CATALYTIC ACTIVITY: L-TRYPTOPHAN + TETRAHYDROPTERIDINE + O(2)
5-HYDROXY-L-TRYPTOPHAN + DIHYDROPTERIDINE + H(2)O.
-I- COFACTOR: PERROUS ION.
-I- PATHWAY: THIS IS THE RATE-LIMITING ENZYME IN THE BIOSYNTHESIS SEROTONIN IN THE CENTRAL NERVOUS SYSTEM AND CATALYZES THE FIRS STEP OF THE SYNTHESIS OF MELATONIN IN THE PINEAL GLAND.
-I- SUBUNIT: MULTIMER OF IDENTICAL SUBUNITS.
-I- SUBUNIT: BELONGS TO THE BIOPTERIN-DEPENDENT AROMATIC AMINO
                                                                                                             SEQUENCE FROM N.A. MEDLINE-90243261; Stoll J., Kozak C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00351; biopterin_H; 1.
PRINTS; PR00372; FYWHYDRXLASE.
PROSITE; PS00367; BIOPTERIN_HYDROXYL;
Oxidoreductase; Monooxygenase; Serotor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR;
PIR;
PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Isolation of a rat pineal gland
and phenylalanine hydroxylases."
FEBS Lett. 206:43-46(1986).
-I- CATALYTIC ACTIVITY: L-TRYPTO
                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M28000;
EMBL; X53501;
                                                                                                                                                                                                        NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; JL0034; WHRTW.
; A24367; A24367.
; A60034; A60034.
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IPR001273; -.
IPR002912; -.
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CAA37579.1;
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272
277
317
317
51068
                                                                                                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73.9%;
                       L-TRYPTOPHAN
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IRON
IRON
    YPTOPHAN + TETRAHYDROPTERIDINE DIHYDROPTERIDINE + H(2)0.
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                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C3CF5245727CC825
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(BY SIMILARITY).
(BY SIMILARITY).
(CF5245727CC825 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    biosynthesis; Iron;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 444;
                                                                                          CDNA
                                                                     cell line.";
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                                                                                                                                                                                                                                                                                                                        5-HYDROXYLASE).
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                       0(2)
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L outstation -
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RESULT 14
ZP2_RABIT
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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HSSP; P04177; 1T0H.
MGD; MGI:98796; Tph.
InterPro; IPR001273; -.
InterPro; IPR002912; -.
Pfam; PF01842; ACT; 1.
Pfam; PF00351; biopterin_H; 1.
PRINTS; PR00372; FYMHYDRXLASE.
PROSITE; PS00367; BIOPTERIN_HYDR
                                                          zona pell
J. Biol.
                                                                                                                                          SEQUENCE FROM N.A.
STRAIN-NEW ZEALAND WHITE; TISSUE-Ovary;
MEDLINE-93286072; PubMed-7685342;
                                                                                                                                                                                                    ZP2 OR ZPA.

Oryctclagus cuniculus (Rabbit).

Eukaryota; Metazoa; Chordata; CI
Mammalla; Eutheria; Lagomorpha;

NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                         01-FEB-1996 (Rel. 33, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
01-FEB-1996 (Rel. 39, Last sequence update)
30-MAY-2000 (Rel. 39, Last annotation update)
20NA PELLUCIDA SPERM-BINDING PROTEIN 2 (ZONA PELLUCIDA GLYCOPROTEIN 2PP2) (ZONA PELLUCIDA PROTEIN A) (75 KDA ZONA PELLUCIDA PROTEIN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             METAL
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a cobtween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and foentitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
            "Identification and structural characterization of the 75-kDa zona pellucida protein.";
J. Biol. Chem. 268:12412-12417(1993).
-I- FUNCTION: ZP2 FORMS WITH ZP1 AND ZP3 THE ZONA PELLUCIDA, I WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP3 ACTS AS A SECONDARY SPERM RECEPTOR (BY STRILDARTY).
-I- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLUL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; J04758; AAA63401.1;
PIR; A34582; A34582.
                                                                                                                 Lee V.H., Schwoebel E.D., Prasad Cook R.G., Dunbar B.S.;
                                                                                                                                                                                                                                                                                                                                                                                     ZP2_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oxidoreductase; Monooxygenase; Serotonin biosynthesis;
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                                                                                                                                                                                                                                                                                   (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                       P48829;
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ZP2 ACTS AS A SUBCELLULAR I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COFACTOR: FERROUS ION.
PATHWAY: THIS IS THE RATE-LIMITING ENZYME IN THE BIOSYNTHESIS OF
SEROTONIN IN THE CENTRAL NERVOUS SYSTEM AND CATALYZES THE FIRST
STEP OF THE SYNTHESIS OF MELATONIN IN THE PINEAL GLAND.
SUBUNIT: MULTITMER OF IDENTICAL SUBUNITS.
SIMILARITY: BELONGS TO THE BIOPTERIN-DEPENDENT AROMATIC AMINO AC:
HYDROXYLASES FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GLCKQDG
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6; Conserv
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280
320
447
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275
280
320
51343 .
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IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
IRON (BY SIMILARITY).
; 16C839F22A138BCA CRC64;
                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; a; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                               S.V.,
                                                                                                                              Cheung P., Timmons T.M.
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             EXTRACELLULAR
                                                                                                   75-kDa rabbit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
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                                           ZP1.
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RESULT 15
ZP2_HUMAN
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Q05996;
Q1-FEB-1994
Q1-FEB-1994
Q1-CT-2000
                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
CARBOHYD
SEQUENCE
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CARBOHYD
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CARBOHYD
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TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
       Loftus B.J.,
Fuhrmann J.,
                                                                                                                                                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
                                    SEQUENCE FROM
                                                                    promoter
                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                       NCBI_TaxID=9606;
                                                                                                                                                                                        GLYCOPROTEIN
                                                                                                                                                                                                   ZONA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00100;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; L12167; AAA31502.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          between
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                                                  lang L.-F., Dean J.; "Conservation of mammalian secondary sperm receptor genes enables promoter of the human gene to function in mouse occytes."; Dev. Biol. 156:399-408(1993).
                                                                                                                                                Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ÷
                           MEDLINE-99425270;
                                                                                               MEDLINE=93215931;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nterPro;
                                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                         1 GGLCVQDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PTM: SULFATED G (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PTM: PROTEOLYTICALLY CLEAVED AFTER FERTILIZATION, AND THI MODIFICATION, ALONG WITH PRESUMED CHANGES IN ZP3 MAY PLAY IMPORTANT ROLE IN THE POSTFERTILIZATION BLOCK TO POLYSPER PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: CONTAINS 1 ZP DOMAIN.
                                                                                                                                                                                      PELLUCIDA SPE
OPROTEIN ZP2)
                                                                                                                                                                                                                                                                                                     GELCTODG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SWISS-PROT entry is copyright. It is produ
                                                                                                                                                                                                                                                                                                                                          Similarity
6; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IPR001507;
                                                                                                                                                            (Rel. 28, LIBALES, CIBALE)
(Rel. 28, Last sequence update)
(Rel. 40, Last annotation update)
I(Rel. 40, Last annotation update)
IIA SPERM-BINDING PROTEIN 2 PRECURSOR (ZONA PELLUCIDA IN ZP2) (ZONA PELLUCIDA PROTEIN A).
                                                                                                                                                                                                                                                                                                                                                                                          613
666
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537 656

57 666

8 38

1 73

1 126

127

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613

73644 MW;
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               Kim U.-J.,
                                   N.A.
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32; zP_DOMAIN; 1
                                                                                                                                                                                                                                                   STANDARD;
PubMed=10493829;
U.-J., Sneddon V.P., Kalush F
                                                                                       PubMed=8385033;
J.;
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CYTOPLASMIC (POTENTIAL).
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Catarrhini;
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search completed: June 13, 2001, 14:21:48 Job time: 808 sec
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Best Local Similarity 75.0%;
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-1- TISSUE SPECIFICITY: OOCYTES.
-1- DEVELOPMENTAL STAGE: EXPRESSED DURING THE 2-WEEK GROWTH PHASE OOGENESIS, PRIOR TO OVULATION.
-1- PTM: IS PROTECLYTICALLY CLEAVED AFFER FERTILIZATION, AND THIS MODIFICATION, ALONG MITH PRESSUMED CHANGES IN ZP3 MAY PLAY AN IMPORTANT ROLE IN THE POSTFERTILIZATION BLOCK TO POLYSPERMY.
-1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES
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-I- FUNCTION: ZP2 FORMS WITH ZP1 AND ZP3 THE ZONA PELLUCIDA, IN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con entitles requires a license agreement (See http://www.isb-sib.ch/aror send an email to license@isb-sib.ch).
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CYTOPLASMIC (POTENTIAL).
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1 Q9WU64
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4 Q11308
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Q9xx28 caenorhabdi
Q9wu64 mus musculu
Q9v4m1 drosophila
O11308 molluscum c
Q98187 molluscum c
Q99466 homo sapien
Q99940 homo sapien
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09pk45 chlamydia m

0918f5 vibrio mimi

09r3v6 vibrio chol

0917q6 vibrio chol

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001003 gaeumannomy

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091216 arabidopsis

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STRAIN-D/UW-3/CX;
MEDLINE-99000809; PubMed-9784136;
Stephens R.S., Kalman S., Lammel C.J., Fa
Mitchell W.P., Olinger L., Tatusov R.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Genome sequence of an obligate intracellular pathogen of humans: Chlamydia trachomatis.";
Science 282:754-759(1998).
EMBL; AE001338; AAC67944.1; -.
SEQUENCE 196 AA; 21978 MW; E0B6CFFD52F93073 CRC64;
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Bacteria; Chlamydiales;
NCBI_TaxID=813;
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01-NOV-1998 (TrEMBLrel.
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MAF-TYPE PROTEIN.
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TC0628.
Chlamydia muridarum.
Bacteria; Chlamydiales; CNLAMYDIA.
NCBI_TaxID-83560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hickey E.K., Peterson J., Umayam L.A., Utterback T., Berry K., Bass S., Linher K., Weldman J., Khouri H., Craven B., Bowman C., Dodson R., Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty G., Salzberg S.L., Eisen J., Fraser C.M.;
Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AE00231; AAF39457.1;
TIGR; TC0628;
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01-OCT-2000 (
01-OCT-2000 (
01-OCT-2000 (
                                                                                                              vibrio mimicus: evidence for recent horizontal t. mimicus and v. cholerae.";
Infect. Immun. 68.1507-1513(2000).
EMBL; AF207857; AAF40142.1;
NON_TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Genome sequences of Chlamydia trachomatis MoPn pneumoniae AR39.";
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                                                                                                                                                                                                                                              Bacteria; Proteobacteria;
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                                                                                                                                                                    Boyd E.F., Moyer K.E., Shi L., Waldor M.K.; "Infectious CTXPhi and the vibrio pathogeni
                                                                                                                                                                                          MEDLINE=20143766; PubMed=10678967;
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STRAIN-019-TOR OGAWA;
Zhi-Yong H., Wel-Jie Z., X
"Cloning and Expression of
Submitted (JAN-1999) to th
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09L7Q6;
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STRAIN-EL TOR N16961 / SEROTYPE 01;

MEDLINE-20406833; PubMed-10952301;

Heidelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.I.

Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,

Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,

Ermoleeva M.D., Vanathevan J., Bass S., Qin H., Dragol I., Seller

McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White C

Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-KNIH002;
Shin H.J., Park Y.C., Kim Y.C.;
Shin H.J., Park Y.C., Kim Y.C.;
"Cloning and nucleotide sequence analysis of the virulence
cassette from Vibrio cholerae KNIH002 isolated in Korea.";
misainmurhag Hoiji 35:205-210(1999).
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Bacteria; Proteobacteria;
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EMBL; AF123049; AAD26854.1;
EMBL; AE004224; AAF94615.1;
TIGR; VC1458;
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Bacteria; Proteobacteria;
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Kan B.,
                      STRAIN-86015;
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of zot Gene from Vibrio cholerae.";
the EMBL/GenBank/DDBJ databases.
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P MEDLINE-96112750; PubMed-8664505;

MOSDOURN A., Bowyer P., Lunness P., Clarke B., Daniels M.;

A OSDOURN A., Bowyer P., Lunness P., Clarke B., Daniels M.;

"Fungal pathogens of oat roots and tomato leaves employ c

related enzymes to detoxify different host plant saponins

Mol. Plant Microbe Interact. 8:971-978(1995).

EMBL, U35463, AAB09777.1;

R EMBL, U35463, AAB09777.1;

R MENDEL; 20854; Gaegr;3099;20854.

R INTERPRO; IPRO01764; -.

R INTERPRO; IPRO02772; -.

R PFAM; PF00933; Glyco_hydro_3; 1.

R PFAM; PF00933; Glyco_hydro_3; 1.

R PFAM; PF00933; Glyco_hydro_3; 1.

R PFAM; PF01915; Glyco_hydro_3; 1.

R PFAM; PF033; GLYCOSYL_HYDROL_F3; 1.

PROSITE; PS00775; GLYCOSYL_HYDROL_F3; 1.
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Q9QW58;
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submitted (JAN-2000) to the EMBL/GenBank/DDBJ
EMBL; AF220606; AAF29547.1; -.
EMBL SEQUENCE 399 AA; 44990 MW; CF6A3DBCC9E23EF
SEQUENCE FROM N.A.

MEDLINE=93050801; PubMed=1426644;

Reaume A.G., Conlon R.A., Zirngibl R., Yam

"Expression analysis of a Notch homologue
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Q00903;
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Eukaryota; Fungi; Ascomycota; As
Magnaporthaceae; Gaeumannomyces
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PROSITE; PSO0101; ASX, HYDROXYL; 7.
PROSITE; PS00022; EGF_1; UNKNOWN_13.
PROSITE; PS01186; EGF_2; 9.
PROSITE; PS01187; EGF_CA; 7.
PROSITE; PS01187; EGF_CA; 7.
SEQUENCE 861 AA; 92706 MM; 84BAEBS
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INTERPRO; IPR001881; -.
INTERPRO; IPR002049; -.
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                                                                                                                                                                                                               EU Arabidopsis sequencing project; Submitted (APR-2000) to the EMBL/GenBank/DDBJ EMBL; AL162459; CAB82808.1; -
                                                                                                                                                                                                                                                                                                                                 Arabidopsis thaliana (Mouse-ear cress). Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta; Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Hadicotyledons; Core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                            Q9LZU6;
01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
HYPOTHETICAL 71.7 KDA PROTEIN.
                                                                                                                                                                                            Hypothetical protein. SEQUENCE 633 AA; 71695 MW;
                                                                                                                                                                                                                                                                               Rudd
                                                                                                                                                                                                                                                                               Jordan N
Rudd S.,
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                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=3702;
                                                                                                624 GGCCVDDG 631
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nes 6; Conser
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                                                                                                                                                                                                                                                                    N., Bangert S., Wiedelmann R., Voss H.,
., Lemcke K., Mayer K.F.X., Quetier F., 9
ted (MAR-2000) to the EMBL/GenBank/DDBJ of
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IPR000561; -.
IPR000742; -.
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 (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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                                            PRELIMINARY;
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75.0%;
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  13,
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Last sequence up
Last annotation
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Pred. No.
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Pred.
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                                                                                                                                                                                             2758B9C38381DF14 CRC64;
                                                                                                                                        Mismatches
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                                            1677
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Salanoubat
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                                                                                                                                                            Length 633;
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Best Local S
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Best Local (
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SEQUENCE FROM N.A.
MEDLINE-97237046; PubMed-9119394;
MEDLINE-97237046; P.J., Cooper P.R., M.
Stankovic T., Byrd P.J., Cooper P.R., M.
Riley J.H., Watts G.D.J., Ambrose H., M.
Sutcliffe A., Mills T., Taylor A.M.R.;
"Construction of a transcription map ar
telanglectasia: identification of at lea
Genomics 40:267-276(1997).
EMBL; x99962; CAA68227.1; -.
HSSP, P05713; 3RAB.
HSSP, P05713; 3RAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang D.-z., Lin J.J.-C.;

Submitted (MAR-1998) to the

EMBL; AF051945; AAC06023.1;

MGD; MGT:1333878; Xin.

SEQUENCE 1677 AA; 182084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-CARDIAC MUSCLE;
Wang D.-Z., Hu X., Lin J.L.
Front. Biosci. 1:0-0(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; NCBI_TaxID=10090;
                                                                                                                                                       NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                    01-964;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence up
01-OCT-2000 (TrEMBLrel. 15, Last annotation
RAB-RELATED GTP-BINDING PROTEIN (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                             Q14964
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                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
  Q9XX28
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                                                       GEICIQDG
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6; Conservative
                                                                                                                                                                                         PR00449;
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5; Conserv
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; IPR001806; -.
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  PRELIMINARY;
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                                                                                                                                                        217
24869 MW;
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75.0%;
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62.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 36; DB Pred. No. 1.1e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MW;
                                                                                                  Score 35; DB Pred. No. 23; 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
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Sciurognathi; Muridae;
   PRT;
                                                                                                                                                         AA9A29731F42B8F5
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                                                                                                                                                                                                                                                          around the gene for ataxia least four novel genes.";
    296
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McGuire G., S
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                                                                                                               DB 4;
23;
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1.1e+02;
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                                                                                                                         Length 217;
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; Murinae; Mus
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AC OCC OCC RAP RAC OCC RAN
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Best Local S
Matches 6
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PRINTS; PRO0080; SDRFAMILY.
PRINTS; PR00081; GDHRDH.
PRINTS; PR01167; INSADHFAMILY.
PROSITE; PS00061; ADH_SHORT; UNI
PROSITE; PS00061; ADH_SHORT; UNI
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01-NOV-1999 (TrEMBLrel. 1
01-NOV-1999 (TrEMBLrel. 1
01-OCT-2000 (TrEMBLrel. 1
Y39AIA.11 PROTEIN.
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HSSP; P19992; IHDC
INTERPRO; IPR002198; -.
INTERPRO; IPR002347; -.
INTERPRO; IPR002424; -.
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Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulso,
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,
Gardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston I.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,
Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownke,
Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,
Thierry-Mieg J., Thomas K., Vaudin M., Vaughan K., Waterston R.,
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;
Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;

"2.2 Mb of contiguous nucleotide sequence from chromosome III of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wall M.;
"2.2 Mb of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Caenorhabditis elegans.
Eukaryota; Metazoa; Nematc
Rhabditidae; Peloderinae;
NCBI_TaxID=6239;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "2.2 Mb of contiguous nucleotide
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                                                               Mus musculus (Mouse).
Eukaryota; Metazoa; C
Mammalia; Eutheria; R
                                                                                                                     01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation updat
GLYCEROL KINASE-LIKE PROTEIN 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 368:32-38(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          elegans.
           SEQUENCE FROM N.A.
STRAIN=129SV; TISS
                                                                                                           GK-RS1 OR GKRS1
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                                                 NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                           GGLCVQDG
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                                                                                                                                                                                                                                                                                                               Similarity 75.06; Conservative
 Decker W.K.,
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            TISSUE-TESTES;
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                                                                    Chordata;
Rodentia;
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75.0%;
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Huq
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A.H.H.
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                                                                                                                                                                                                                                                                                                                  score 35; DB
Pred. No. 32;
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                    UNKNOWN_1.
; B1518A53D4ABE025 CRC64;
                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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  Craigen
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RESULT
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RX MEDLINE-20196006; PubMed-10731132;
RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barandon R.C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Abril J.F., Agbayani A., An H.-J., Andrews-pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Cadleu E., Center A., Chandra I.,
RA Ghorey J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
RA Dodson K., Doup L.E., Downes M., Dugan Rocha S., Dunkov B.C., Dunn P.,
RA Harris N.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Kraft C., Kravitz S., Kullp D., Lai Z.,
RA Liu X., Mattel B., McIntosh T.C., McLeod M.P., McPherson D.,
RA Meinert K., Redlagton K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Nelson D.R., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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01-MAY-2000 (
01-OCT-2000 (
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SEQUENCE
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Eukaryota; Metazoa; Arthropoda; Tracheata;
Pterygota; Neoptera; Endopterygota; Diptera
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
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llidae; Drosophila.
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011308;
01-JUL-1997
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"The genome sequence of Drosophila melanogaster.";
Science 287:2185-2195(2000).
EMBL; AE003841; AAF59247.1; -.
BISSP; P11883; 1AD3.
                                                                                                                                           SEQUENCE FROM N.A.

SEQUENCE FROM N.A., Agromayor M., Nunez A., Funes J.M., Varas A.J.,

Moratilla M., Agromayor M., Nunez A.,

Lopez-Estebaranz J.L., Collado M., Pavon M., Martin-Gallardo A.;

Submitted (Jan-1997) to the EMBL/GenBank/DDBJ databases.

EMBL; U86894; AAB57938.1; -.

INTERPRO; IPRO02221; -.

PROSITE; PS00317; 4_DISULFIDE_CORE; UNKNOWN_1.

SEQUENCE 640 AA; 68996 MW; 23752F0B08B49BEA CRC64;
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PROSITE; I
PROSITE; I
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01-JUL-1997 (TrEMBLrel.
01-MAY-2000 (TrEMBLrel.
SIMILAR TO VARIOLA C15L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE=97093414; PubMed=8938976;
Martin-Gallardo A., Moratilla M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses; dsDNA viruses, Molluscipoxvirus.
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Wang Z.-Y., Wassarman D.
                                                                                                                                                                                                                                                                                                                                                Lopez-Estebaranz
Virus Genes 0:0-0
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Varas A.J., Collado M., Valencia
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ALDEHYDE_DEHYDR_GLU; 1.
; 62697 MW; F68ACB3F904B0D7A CRC64;
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                                               Pred. No. 67;
0; Mismatches
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VACCINIA F11L.
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, Martin-Gallardo
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Lopez-Estebaranz J.L.,
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Poxviridae; Chordopoxvirinae;
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67;
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151 GACVQDG

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Search completed: June 13, 2001, 14:20:36 Job time: 736 sec
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Best Local Similarity 85.7
Matches 6; Conservative
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151 GACVQDG 157
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Submitted (JUN-1996) to the EMBL/GenBank/DDBJ databases.
EMBL; U60315; AAC55146.1; -.
INTERPRO; IPR002221; -
PROSITE; PS00317; 4_DISULFIDE_CORE; UNKNOWN_1.
SEQUENCE 680 AA; 72398 MW; 12CB3BD9E61AA72B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O98187 PRELIMINARY; PRT; 680 AA.

Q98187;
Q1-FEB-1997 (TrEMBLrel. 02, Created)
01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
MC018L.
MC018L.
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE=96325459; PubMed=8670425;
Senkevich T.G., Bugert J.J., Sisler J.R., Koonin E.V., Darai G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molluscum contagiosum virus subtype 1 (MCVI).
Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
Molluscipoxvirus.
MCBI_TaxID-10280;
                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.Á.
Senkevich T.G., Bugert J.J., Sisler J.R., Koonin E.V., Darai G.,
                                                                                                                                                                                                                                                                                                                                                            "Genome sequence of a human tumorigenic poxvirus: prediction of specific host response-evasion genes."; Science 273:813-816(1996).
                                                                                                                                                                                                                                                                                                                                                                                                          Moss B.;
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                                                                                                                                       76.1%; Score 35; DB 14; Length 680; 85.7%; Pred. No. 71; ative 0; Mismatches 1; Indels
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       June 13, 2001, 14:16:36 ; Search time 118.55 Seconds (without alignments) 1.296 Million cell updates/sec
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/cgn2_6/ptodata/2/18a/PCTUS_COMB.pep:*
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US-08-453-952-5
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US-08-445-223A-10

US-08-484-9938-14

US-08-484-158B-14

US-08-484-1596A-14
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                       US-08-624-601-8
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US-08-701-191A-13	US-08-701-191A-40	US-08-471-570-2	US-08-336-343A-18	US-08-336-343A-17	US-07-736-178C-2	US-08-946-994-14	US-08-665-574C-14	US-08-097-997A-14	US-08-651-999A-7	US-08-651-999A-1	US-08-532-384-20	US-08-083-590A-20	US-08-185-432-17	US-09-253-682-26	US-08-926-922-26	US-08-414-926A-26	US-08-681-812-2
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ALIGNMENTS

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Sequence 8, Application US/08624601
Patent No. 5882653
APPLICANT: Kaper Dr., James B.
APPLICANT: Levine Dr., Myron M.
TITLE OF INVENTION: (CVD112 and CVD111) and non-Ol
TITLE OF INVENTION: Of making same and products thereof
NUMBER OF SEQUENCES:
CORRESSONDENCE ADDRESS:
ADDRESSEE: Spencer & Frank
STREET: 1100 New York Ave. N.W. Suite 300 East
CITY: Washington
STATE: D.C.
COUNTY: Washington
TIPE 20005
COMPUTER EADABLE FORM:
KEDIUM TYPE: PLOPY disk
COMPUTER: LAN FC Compatible
OPERATING SYSTEM: PC DOS/MS-DOS
SOFTMARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION NOMBER: 05/08/MS-DOS
SOFTMARE: PATENTION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Schneller Dr., John W.
REGISTRATION UNMBER: BAMC20019P2
TELECOMMUNICATION: 1070HAM-TION:
REFERENCE/DOCKET NUMBER: BAMC20019P2
TELECOMMUNICATION: 1070HAM-TION:
TELEPHOME: (202)414-4000
TELERAX: ```

APPLICANT:

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US-08-484-158B-10
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Patent No. 5976545
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   Sequence 10, Patent No. 5
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TELEX: 25-3856
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APPLICATION UNMER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
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TELECOMMUNICATION INFORMATION:
   FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,1
   SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
  NUMBER OF SEQUENCES: 5
   APPLICANT: Hsu, Kuang T. APPLICANT: Podolski, Jose
   FITLE OF INVENTION:
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  STREET: 6300 S
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   Conservative
   Harris Ph.D., Jeffrey D.
  Conservative
  312/474-6653
   protein
  Materials and Methods for Immunocontraception
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75.0%;
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  REFERENCE/DOCKET NUMBER: 32
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
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FILING DATE: 29-JAN-93
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FILING DATE: 09-NOV-93
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  APPLICANT:
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STATE: Illinoi
  TELEPHONE: 312/4.0448
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FILING DATE: 07-JUNE-95
CLASSIFICATION: 514
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  715 amino acids
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   Hsu, Kuang
Podolski,
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  Materials and Methods for Immunocontraception
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COMPUTER READABLE FORM:

COUNTRY:

United States of America

MEDIUM TYPE:

Floppy disk

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  CORRESPONDENCE ADDRESS:
  APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
  MOLECULE TYPE:
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   TYPE: amino acid
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  APPLICATION NUMBER: US/01 FILING DATE: 07-JUN-1995
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   REFERENCE/DOCKET NUMBER: 31,107
   NAME: Clough, David W. REGISTRATION NUMBER: 3
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FILING DATE: 09-NOV-1992
ATTORNEY AGENT INFORMATION:
NAME: Clough, David W.
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FILING DATE: 09-NOV-1992
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  APPLICANT: HSU, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
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TYPE: amino acid TOPOLOGY: linear

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  APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
APPLICANT: VOICENTENT OF THE POTOLSKI, JOSEPH S.
   366 GDLCTQDG 373
   SEQUENCE CHARACTERISTICS
   ATTORNEY/AGENT INFORMATION:
  MOLECULE TYPE:
   TLE OF INVENTION:
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CLASSIFICATION:
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   TELEPHONE: 312/474-66
TELEFAX: 312/474-0448
  NAME: Clough, David W. REGISTRATION NUMBER: 3
   APPLICATION NUMBER: 07/9 FILING DATE: 09-NOV-1992
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  DDRESSEE:
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  E: Marshall, O'Toole, 6300 Sears Tower, 233
   linear
  Conservative
  protein
   Materials and Methods for Immunocontraception
  76.1%;
75.0%;
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  NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 317
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TELEPHONE: 312/474-6653
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  CORRESPONDENCE ADDRESS:
   ATTILE OF INVENTION: Materials and Methods for Immunocontraception NUMBER OF SEQUENCES: 59
   ATTORNEY/AGENT INFORMATION: NAME: Clough, David W.
  APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Pharmaceutical
TITLE OF INVENTION: Immunocontracep
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   TELLEFAX: 25-3856
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   STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
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   1 GGLCVQDG 8
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6300 Sears Tower, 233 South Wacker Drive
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6300 Sears Tower, 233 South Wacker Drive
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United States of America

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FILING DATE: 09-NOV-92
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  PRIOR APPLICATION DATA:
   APPLICATION NUMBER:
FILING DATE: 09-NOV-
APPLICATION NUMBER:
FILING DATE: 29-JAN-
   NUMBER OF SEQUENCES:
   TITLE OF INVENTION:
TELEPHONE: 312/474-6653
  368 GDLCTQDG 375
                              NAME: Clough, David W. REGISTRATION NUMBER: 36 REFERENCE/DOCKET NUMBER:
  FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
  TELEPHONE: 312/474-66: TELEFAX: 312/474-0448
  APPLICATION NUMBER: 08/14 FILING DATE: 11-NOV-1993
  COUNTRY:
  CITY: Chicago
   NAME: Clough, David W. REGISTRATION NUMBER:
   APPLICATION NUMBER:
  STREET:
  REFERENCE/DOCKET NUMBER:
  APPLICATION NUMBER:
  1 GGLCVQDG 8
  : Illinois.
RY: United States
60606-6402
  5989550
  amino acid
   Application US/08480150A
  6300 Sears Tower,
  716 amino acids
  Hsu, Kuang T..
Podolski, Joseph S.
WENTION: Materials and Methods for Immunocontraception
   Conservative
   Harris Ph.D., Jeffrey D
  linear
   protein
  29-JAN-1993
  09-NOV-1993
   76.1%;
75.0%;
  Release #1.0, Version #1.25
   07/973,341
  US 08/149,223
   07/973,341
   08/149,223
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  08/012,990
  O'Toole, Gerstein, Murray & Borun
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TELEFAX:

312/474-0448

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INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 716 amino acids
TYPE: amino acid
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
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REFERENCE/DOCKET NUMBER: 31:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312,474-6653
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nes 6; Conserv
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  CITY: Chicago
STATE: Illinois
  TYPE: amino acid
   STREET:
   TOPOLOGY:
  LENGTH:
  NAME: Clough, David W
REGISTRATION NUMBER: :
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   ADDRESSEE:
   TOPOLOGY:
   1 GGLCVQDG 8
  INFORMATION:
   PRY: United States of America 60606-6402
  Application US/08458731
   E: Marshall, O'Toole, Gerstein, Murray & 6300 Sears Tower, 233 South Wacker Drive
  716 amino acids
  Hsu, Kuang
Podolski, J
  Harris Ph.D., Jeffrey D.
   Conservative
                Conservative
  PatentIn Release #1.0, Version
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  76.1%;
75.0%;

    Joseph S.
    Materials and Methods for Immunocontraception

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US-08-149-223A-14
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FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
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APPLICANT: Hilbert, 7
TITLE OF INVENTION: N
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COMPUTER: IBM PC compatible
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  CORRESPONDENCE ADDRESS:
   APPLICANT: Hsu, Kuang APPLICANT: Podolski,
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  TRY: United States of America 60606-6402
  Chicago
  amino acid
  Illinois
   716 amino acids
   6300 Sears Tower,
   Podolski, Joseph S.
VENTION: Materials and Methods for Immunocontraception
   Teebor, George W
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  Harris Ph.D., Jeffrey
  linear
   Marshall, O'Toole,
00 Sears Tower, 233
  375
  09-NOV-1993
               MAMMALIAN ENDONUCLEASE III AND DIAGNOSTIC AND THERAPEUTIC USES THEREOF
   76.1%;
75.0%;
   Timothy
  Release #1.0, Version
  US/08/149,223A
  08/012,990
  07/973,341
  36, 107
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South Wacker Drive
  DB 3; 1.3e+02; 2;
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Best Local Similarity 71.4
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TELEFAX: 201-343-1684
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APPLICANT:
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FRAGMENT TYPE:
ORIGINAL SOURCE:
   APPLICANT: Adams, Mark
TITLE OF INVENTION: TRA
NUMBER OF SEQUENCES: 1:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
   TELECOMMUNICATION INFORMATION:
   ATTORNEY/AGENT INFORMATION: NAME: Jackson Esq., Davi
   CORRESPONDENCE ADDRESS:
ADDRESSEE: David A. Jackson, Esq.
STREET: 411 Hackensack Ave, Continental Plaza, 4th
  ADDRESSEE: STUART & STREET: 6 Becker Fa CITY: Roseland STATE: New Jersey
  MOLECULE TYPE:
  NAME: Jackson Esq., David A.
REGISTRATION NUMBER: 26,742
REFERENCE/DOCKET NUMBER: 1049-1-001 N
   60 GCLCLED 66
  CITY: Hackensack
STATE: New Jersey
  ZIP: 07068
  COUNTRY:
  ADDRESSEE:
  TOPOLOGY:
   GGLCVQD 7
   E: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI, E: STUART & OLSTEIN 6 Becker Farm Road
   Fuldner, Rebecca
Fei-Wei, Ying
  USA
   Meissner, Paul
   Adams, Mark
VENTION: TRANSFORMING GROWTH FACTOR ALPHA HI
  USA
  S. pombe
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  N-terminal
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US/08/468,846
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Pred. No.
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  INFORMATION FOR SEQ ID NO:
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LENGTH: 380 amino acid
  FILING DATE: 08-MAR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ferraro, Gregory D.
NAME: Ferraro, 36,1
  TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700
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85 GGVCKEDG 92
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Gaps

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GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd

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Maximum Match 100%
Listing first 45 s
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  Title:
Perfect score:
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Maximum DB seq
  Total number of hits satisfying chosen parameters:
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   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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  summaries
  Y79123
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   Peptide antagnonis
Peptide antagonist
Human foetal intes
Human foetal intes
  Description
                   Protein encoded by Peptide antagonist Complex scuPA/suPA
   Murine BrE-3 immun
Murine BrE-3 immun
   Peptide antagonist
```

| 34                 | 34                 | 34                 | 34     | 34                | 34     | 34     | 34                | 34     | 34                 | 34           | 34                 | 34       | 34     | 34        | 34        | 34                 | 34        | 34                 | 35                 | 35     | 35     | 35        | 35       | 35                 | <u>ა</u> | 35     | 36     | 36     | 36        | 37                 | 37                 | 37                 | 37                 |  |
|--------------------|--------------------|--------------------|--------|-------------------|--------|--------|-------------------|--------|--------------------|--------------|--------------------|----------|--------|-----------|-----------|--------------------|-----------|--------------------|--------------------|--------|--------|-----------|----------|--------------------|----------|--------|--------|--------|-----------|--------------------|--------------------|--------------------|--------------------|--|
| -                  | 81.0               |                    | :      | ۲.                |        | 7      | ۲                 |        |                    | :            |                    | ۲        |        | 7         | 1         | ٢                  | ۲         | ۲                  | ω                  | ω      | ω.     | Ψ         | ω        | ω                  | ω        | ω      | 5      | 5      | 5         | 8                  | 8                  | 8                  | œ                  |  |
| 73                 | 62                 | 40                 | 37     | 30                | 30     | 27     | 20                | 20     | 20                 | .18          | 18                 | 13       | 13     | 13        | ထ         | 80                 | 80        | 80                 | 500                | 239    | 225    | 119       | 119      | 119                | 118      | 115    | 124    | 118    | 98        | 123                | 121                | 120                | 118                |  |
| 21                 | 16                 | 7                  | 17     | 21                | 17     | 18     | 21                | 20     | 19                 | 16           | 16                 | 20       | 20     | 20        | 21        | 21                 | 21        | 21                 | 21                 | 20     | 20     | 20        | 20       | 19                 | 20       | 2      | 19     | 16     | 21        | 15                 | 21                 | 17                 | 16                 |  |
| Y64774             | R76969             | P61028             | W00242 | Y68811            | R87049 | W16581 | Y79130            | W94487 | W68169             | R82833       | W73953             | W86088   | W86076 | W86096    | Y79127    | Y79124             | Y79117    | Y79111             | B07654             | Y15408 | Y15409 | W73503    | Y32832   | W69322             | Y15401   | Y96064 | W80816 | R66331 | B40074    | R54811             | B53648             | W00240             | R66314             |  |
| Human 5' EST relat | HSV-neutralising a | H-chain variable r | ceptor | Human heavy chain |        | SV F   | Human adult heart | heaı   | Human IgG heavy ch | rminal of CI | IgG heavy chain fr | from hun |        | from huma | antagonis | Peptide antagonist | antagonis | Peptide antagonist | Llama antibody fra |        | anti-  | body 15D3 | VH chain | 15D3 antibody heav | ტ.       | anti-  |        | immu   | -hIL12 ar | SpA-reactive VH re | Human colon cancer | EGF receptor chime | Human immunoglobul |  |

## ALIGNMENTS

Peptide antagonist of zonulin.

05-JUN-2000 Y79123;

(first entry)

Y79123 standard; Peptide;

œ ጅ

```
Zonulin; antagonist; zonula occludens toxin receptor; blood-brain barrier; antiinflammatory; cerebroprotective; neuroprotective; dermatological; antiulcer; antiviral;
                  WPI; .2000-205565/18
   03-AUG-1998;
  WO200007609-A1.
   Synthetic
  hypotensive; immunosuppressive; antipar gastrointestinal inflammation; therapy.
  (UYMA-) UNIV MARYLAND BALTIMORE.
   28-JUL-1999;
   17-FEB-2000.
   antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
  98US-0127815.
   99WO-US16683
   antiparasitic;
   vasotropic;
```

New peptide antagonist of zonulin useful as antiinflammatory agent for

```
physiologically modulate the opening of mammalian tight junctions (TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of crecombinant DNA techniques. The peptide antagonists are used as an antinflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the creating intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocolitis, shigelosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseases with mucosal erosion or ulcerations, e.g. caused by infestation, e.g. congenital intestinal lymphangiectasia, collagenous colitis, inflammatory bowel disease, diseases with sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, coeliac disease, eosiophilic gastroenteritis, and immune disease, e.g. e.g. systemic lupus erythematosus or food allernies or remarking e.g. e.g. systemic lupus erythematosus or food allernies or common or constances.
  Query Match
Best Local Similarity
"hes 8; Conserv
  RESULT
  Y84661
   pernicious anemia; vasculitis; autoimmune coagulopathy; polymyositis; myasthenia gravis; polyneuritis; pemphigus; rheumatic carditis; Dermatomyositis; scleroderma; asthma; psoriasis; eczematous dermatiti
   celiac disease; Sjogren's syndrome; systemic lupus erythematosus; auto_immune thyroiditis; idiopathic thrombocytopenic purpura;
23-MAR-2000
  APC; lymphocyte proliferation; antigen; auto-immune disorder; immune-related disorder; immune system rejection; multiple sclerosis; organ transplantation; inflammatory disease; allergic disease; thousand a structure of the stru
  25-JUL-2000 (first entry)
  Sequence
  treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
  Peptide antagnonist FZI/0 of zonula occludens toxin (zot) polypeptide
  This present sequence is that of a peptide antagonist of zonulin (Z), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (ZOT) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
   Karposi's
  Human; Zot; zonula occludens toxin; zonulin; antigen presenting cell;
  Y84661 standard;
   hemolytic anemia; Grave's disease; Addison disease; autoimmune orchitis;
   rheumatoid
  μ
  1 GGLLVQPG 8
  N
  sarcoma;
   arthritis; insulin dependent diabetes mellitus;
  œ
  Conservative
  3
  œ
  Protein;
   inflammatory bowel
   100.0%; Score 42; DB 21; 100.0%; Pred. No. 3.2e+05; 0; Mismatches 0;
  œ
   disease;
   proliferative disorder;
   Length 8;
  Indels
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  0;
  Gaps
  0
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Qy

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RESULT
Y79119
밁
  Q
   Query Match
Best Local Similarity
Thehes 7; Conserva
   suppressing antigen presenting cell (APC)-mediated lymphocyte proliferation in a mammalian host pre-exposed to a particular antigen. The method comprises administering to the host an effective amount of a zot-related immunoregulator selected from Zot (zonula occludens toxin) o zonulin, the amount effective to down-regulate the activity of the APC. The method can be used to down-regulate APC-mediated lymphocyte proliferation in mammalian hosts suffering from auto-immune or immune-related disorders, immune system rejection subsequent to tissue or organ transplantation, or inflammatory or allargic diseases. The autoimmune or immune related disorders include multiple sclerosis, rheumatoid arthritis, insulin dependent diabetes mellitus, celiac
   anemia, vasculitis, autoimmune coagulopathies, myasthenia gravis, polyneuritis, pemphigus, rheumatic carditis, polymyositis, permatcomyositis, and scleroderma. The inflammatory or allergic disease permatcomyositis, and scleroderma. The inflammatory or allergic disease
  neuroprotective; dermatological; antiulcer; antiviral;
antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
hypotensive; immunosuppressive; antiparasitic; vasotropic;
   Zonulin; antagonist; zonula occludens toxin receptor; human; blood-brain barrier; antiinflammatory; cerebroprotective;
  Karposi's sarcoma, multiple sclerosis, inflammatory bowel disease, proliferative disorders of smooth muscle cells, and inflammatory conditions associated with mycotic, viral, parasitic, or bacterial
  disease, Sjogren's syndrome, systemic lupus erythematosus, auto-immune thyroiditis, idiopathic thrombocytopenic purpura, hemolytic anemia, Grave's disease, Addison disease, autoimmune orchitis, pernicious
  The present sequence represents a peptide antagonist of zonula toxin (zot) polypeptide. The specification describes a method c suppressing antigen presenting cell (APC)-mediated lymphocyte
  Suppression of antigen presenting cell mediated lymphocyte proliferation, by administering a Zot-related immunoregulator useful for treating immune-related disorders, immune system rejection subsequent to tissue or organ transplantation
  Peptide antagonist
   05-JUN-2000
  Y79119;
  Y79119 standard; Peptide; 8 AA.
   Sequence
   or disorder is selected from asthma, psoriasis, eczematous
   Example 7; Page 59; 95pp; English.
  09-SEP-1999;
   (UYMA-) UNIV MARYLAND BALTIMORE
  1 ggvlvqpg 8
  1 GGLLVQPG
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  Sztein MB,
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   (first entry)
   AA;
  8
  99WO-US18842
  of zonulin.
   92.9%;
  Lu R,
   ; Score 39; DB
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  Tanner MK
  BB
   DB 21;
.2e+05;
   0
  Length 8
   Indels
   dermatitis,
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  oH
   occludens
   Gaps
   or.
```

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Ş
  밁
  C(T)) The peptide antagonists are based on a common motif of 207 cand human zonuline, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of 207 cerombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the 207 receptor in the intestine cand yet does not physiologically modulate the opening of Ty in the intestine. Gastrointestinal inflammation conditions give rise to intestine. Gastrointestinal inflammation conditions give rise to cincerated intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropathy caused by infection, e.g. Clostridium difficile infection, enterocalitis, whighle's disease, diseases with mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphanglectasia, correction of congenital heart disease with Fontan's operation, and after surgical
  New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
Zonulin; mammalian tight junction; zonula occludens toxin; zo Vibrio cholerae; vaccine; cholera toxin; polyclonal antibody;
  that bind to a zonula occludens toxin (20T) receptor, yet do not physiologically modulate the opening of mammalian tight junction
   Claim 1; Page 45;
   Human foetal intestine zonulin N-terminal peptide
   W94489 standard; peptide; 20 AA
  Sequence
   mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases.
   It is one of 25 peptide antagonists (see Y79105-29) of the that bind to a zonula occludens toxin (ZOT) receptor, yet d
   This present sequence is that of a peptide antagonist of zonulin. corresponding to residues 8-15 of human foetal intestinal zonulin
   (UYMA-) UNIV MARYLAND BALTIMORE
   03-AUG-1998;
  28-JUL-1999;
  17-FEB-2000
   WO200007609-A1
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  .g. systemic lupus
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||:|||||
1 ggvlvqpg 8
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  3
  (first entry)
   98US-0127815.
  99WO-US16683.
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   Score 39; DB 21;
Pred. No. 3.2e+05;
1; Mismatches 0;
  or food allergies, primarily
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  invention
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   Gaps
   0
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XSXFXSX
  밁
  Query Match
Best Local Similarity
Watches 7; Conserv
  opening mammalian tight junctions. Zonulin proteins function as

Copysiological modulators of mammalian tight junctions. They can be used

for enhancing the absorption of therapeutic agents across tight

Copysiological modulators of mammalian tight junctions. They can be used

for enhancing the absorption of therapeutic agents across tight

Copysiological modulators of mammalian tight junctions. They can be used

copysiological modulators of the blood brain barrier. Zonulin can be used with agents such as drugs,

copysiological modulation of cobutamine, dopamine, agency in albuphine,

copysiological modulation, dopamine, agency in albuphine,

copysiological modulation, dopamine, proposed, malbuphine,

copysiological modulation, agency in albuphine,

copysiological modulation, copysiological modulation,

copysiological modulation, agency in albuphine,

copysiological modulations, copysiological modulation,

copysiological modulators, copysiological modulation,

copysiological modulation,   New purified zonulin - which is capable of reversibly opening mammalian tight junctions, used for enhancing the delivery of agents across intestinal and nasal mucosa and blood brain barrier
  Homo
  05-JUN-2000
  Claim 2;
   recognised by both anti-tau polyclonal antibody and by anti-zonula occludens toxin (ZOT) polyclonal antibody, and is capable of reversibly
   The present invention describes pure zonulin which has an molecular weight of 47 kD, as determined by SDS-PAGE, whi
  (UYMA-) UNIV MARYLAND BALTIMORE
  21-MAY-1997;
  26-NOV-1998
   Misc-difference
  intestinal mucosa; nasal mucosa; blood brain barrier.
  Y79133 standard; Peptide; 20
   Sequence
  WO9852415-AJ
  peptide of zonulin.
   œ
   1 GGLLVQPG 8
  S
   sapiens
  Page 45; 64pp; English.
   20
   Conservative
  (first entry)
   15
  97US-0859931.
  98WO-US07636
   Location/Qualifiers
  /note= "unspecified"
  92.9%;
   ۲.
  Score
Pred.
   Mismatches
  39;
   0
  DB 2
0.66;
   20;
   0
   Length 20;
   Indels
  apparent
   0;
   Gaps
```

Human foetal intestine zonulin N-terminal sequence

```
밁
  5
  Matches
  Query Match
   The present sequence is that of the N-terminal region of foetal human intestinal zonulin. The N-terminal sequences of human adult and foetal zonulins (see Y79130-36) were compared with Vibrio cholerae zonula occludens toxin (ZOT) to identify a common motif thought to be involved in receptor binding. Peptide antagonists (see Y79105-29) based on this motif are useful as antiinflammation, and for treatment of gastrointestinal inflammation, and for treatment of conditions associated with breakdown of the blood-brain
   Immunoglobulin variable domain; primer; polymerase chain reaction; chimeric antibody; human milk fat globule; BrE-3 VL-chain.
   New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
           15-NOV-1993;
                                  26-MAY-1994
  Mus musculus
  Murine
  24-JAN-1995
  R52775;
   R52775 standard; Protein;
  Sequence
  Example 3;
  WPI; 2000-205565/18
  03-AUG-1998;
  17-FEB-2000
   Misc-difference
  28-JUL-1999;
  WO200007609-A1
   gastrointestinal inflammation; therapy.
   VIND (-AMYD)
  Homo sapiens
   Zonulin; antagonist; zonula occludens toxin receptor;
human; blood-brain barrier; antiinflammatory;
  Local
   1 GGLLVQPG 8
||:||||
8 ggvlvqpg 15
   6
  BrE-3 immunoglobulin heavy chain variable domain N-terminus
   Similarity 7; Conserv
  20
   Fig 6; 69pp;
  Conservative
  (first entry)
   MARYLAND BALTIMORE
  Ą,
           93WO-US11316
  98US-0127815
  99WO-US16683.
   Location/Qualifiers
   /note= "unidentified residue"
  92.9%;
   English.
   25
  Score 39; DB 21;
Pred. No. 0.66;
1; Mismatches (
   B
  0
   Length 20;
   Indels
   0;
  Gaps
  0
```

```
RESULT R52793 ID  Вþ
   δÃ
   Query Match
Best Local Similarity
Matches 7; Conser
   16-NOV-1992;
30-SEP-1993;
08-OCT-1993;
  New analogue peptide(s) coused to develop prods. for therapy and prevention of
  16-NOV-1993;
   used to prepare CDNAs that encode the BrE-3 mouse Ig variable domains. The amplified V-regions lacked constant regions so as to produce less immunogenic polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions. The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The amino acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. R52774 and R52775). The general agreement between the predicted and the determined amino acid sequences that the cloned cDNAs encode BrE-3.
  13-NOV-1992;
13-NOV-1992;
28-SEP-1993;
   Mus musculus
   Immunoglobulin variable domain; primer; polymerase chain reaction; chimeric antibody; human milk fat globule; BrE-3 VL-chain.
  Chimeric human-murine polypeptide(s) specific for human mammary fat globule antigen - for imaging, diagnosing and treating neoplasia, with less undesirable immunogenic response
   WPI; 1994-183510/22.
   26-MAY-1994.
  WO9411509-A.
   Murine BrE-3 immunoglobulin heavy chain variable domain N-terminus
  R52793 standard; Protein; 25
  Sequence
   Primers JO2, JO3, JO4, JO14 and VH1BACK (Q62740-Q62744) were all
  Example 11; Page 32; 54pp; English.
  (CANC-)
   (CANC-) CANCER
   WPI; 1994-183509/22.
   1 GGLLVQPG 8
{|:|||||
8 ggvlvqpg 15
  CANCER
  25 AA;
  Conservative
   (first entry)
   92US-0977696.
93US-0129930.
93US-0134346.
   92US-0977706.
92US-0977707.
93US-0128015.
   RES FUND
   93WO-US11445
  RES FUND CONTRA
  92.9%;
   for use in the detection, diagnosis,
   CONTRA
  neoplasms
   1;
   Score 39;
Pred. No.
   COSTA.
   ced. No. 0.83;
Mismatches
  COSTA
   15;
   0
  Length
   25
   0
   Gaps
```

Example 12; Page 53; 54pp; English

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ş
  밁
  Matches
   Query Match
Best Local
   primers JO2, JO3, JO4, JO14 and VHIBACK (Q62765-Q62769) were all used to prepare cDNAs that encode the BrE-3 mouse Ig variable domains. The amplified V-regions lacked constant regions so as to produce less immunogenic polypeptides. A hybrid polypeptide was prepared using human constant regions with the murine V regions. The chimeric polypeptide retained the binding affinity of BrE-3 for human milk fat globule. The amino acid sequences deduced from the amplified VL and VH regions were compared to N-terminal sequences which had been determined directly (i.e. R52792 and R52793). The general agreement between the predicted and the
B07556-78 represent proteins encoded by open reading frames (UKFS) 8 to 30 of the BLM (Bleomycin) gene cluster. The proteins encoded by the gene cluster are useful for producing peptides and/or polyketide metabolites, especially bleomycin or bleomycin analogues. They are also useful for chemically modifying biological molecules to produce and fatty
  Streptomyces verticillus
   BLM gene cluster; bleomycin gene cluster; polyketide metabolite; bleomycin; bleomycin analogue; holo-carrier protein; thiazolidine;
  Protein encoded by
  B07577;
  Disclosure; Page 97-137; 162pp;
  New bleomycin gene cluster components useful polyketide metabolites, especially bleomycin, chemically modifying biological molecules -
  06-JAN-1999;
05-FEB-1999;
  06-JAN-2000;
   13-JUL-2000
  Misc-difference
  thiazoline; bithiazoline;
  B07577 standard; Protein; 498
  Sequence
  determined amino acid sequences that the cloned cDNAs encode BrE-3.
   (REGC
   WO200040704-A1
  20-OCT-2000
  Local Similarity hes 7; Conserv
  <u>ب</u>
  æ
  8
  GGLLVQPG
  ||:|||||
|ggvlvqpg 15
   2000-465974/40.
   Β,
   UNIV CALIFORNIA.
  Du L,
  25
   99US-0115435.
99US-0118848.
2000US-0477962.
  Conservative
  2000WO-US00445
   (first
  8
  Ą۶
   Sanchez
  /note= "encoded by GTG"
   Location/Qualifiers
  the bleomycin (BLM)
   entry)
   92
87
   . 5%;
   ú
  microbial metabolite;
  Chen
  ۲.
   Score 39;
Pred. No.
  B
  English.
  Mismatches
   Z,
   Edwards
   0
  gene cluster ORF30
   B
  . 83;
   for
   몯
  0,
  for peptide and/or production and for
  sugar.
   Length
   Indels
  0;
  Gaps
  0;
```

```
RESULT
Y79121
      В
   Q
   Query Match
Best Local S
Matches 7
(TJ). The peptide antagonists are based on a common motif of ZOT and human zonulins, which is believed to be critical for receptor binding. They can be prepared by chemical synthesis or by use of recombinant DNA techniques. The peptide antagonists are used as an antiinflammatory agents in the treatment of gastrointestinal inflammation, where they bind to the ZOT receptor in the intestine and yet does not physiologically modulate the opening of TJ in the intestine. Gastrointestinal inflammation conditions give rise to increased intestinal permeability and the peptide is useful for treating intestinal conditions that cause protein losing enteropath caused by infection, e.g. Clostridium difficile infection,
  to produce a holo-carrier protein. The BLM gene cluster or catalytic domains can be used individually or collectively to produce thiazolidine, thiazoline, bithiazoline and bithiazoline containing microbial metabolites. The BLM gene cluster may also be used to produce sugars.
  antibacterial; cytostatic; anti-HIV; vulnerary; antiallergic;
hypotensive; immunosuppressive; antiparasitic; vasotropic;
gastrointestinal inflammation; therapy.
  New peptide antagonist of zonulin useful as antiinflammatory agent treating cerebral ischemia, stroke, cerebral edema, gastritis, shigellosis, viral gastroenteritis, meningitis, encephalomyelitis
   Sequence
  This present sequence is that of a peptide antagonist of zonulin (2), one of 25 such peptides (see Y79105-29) of the invention, which bind to a zonula occludens toxin (20T) receptor, yet do not physiologically modulate the opening of mammalian tight junctions
  05-JUN-2000
  Y79121 standard; Peptide; 8 AA.
   Claim 1; Page 46; 69pp; English.
   WPI; 2000-205565/18
  03-AUG-1998;
  28-JUL-1999;
  17-FEB-2000
  WO200007609-A1
  Synthetic
  plood-brain barrier; antiinflammatory; cerebroprotective;
neuroprotective; dermatological; antiulcer; antiviral;
  Zonulin; antagonist; zonula occludens toxin receptor;
blood-brain barrier; antiinflammatory; cerebroprotect
   Peptide antagonist of
   (UYMA-) UNIV
   86
  1 GGLLVQPG
  9
   gglfvqpg 105
   7; Conserv
   498
  Conservative
  (first entry)
   MARYLAND BALTIMORE
   8
   98US-0127815
  99WO-US16683
   90.5%;
  zonulin
  0;
  Score
Pred.
  Mismatches
   38;
   DB
27;
  1:
  Length 498;
  Indels
                       enteropathy
  0;
  Gaps
  produce
```

```
RESULT
   Query Match
Best Local Similarity
Matches 7; Conser
  mucosal erosion or ulcerations, e.g. gastritis, gastric cancer, collagenous colitis, inflammatory bowel disease, diseases marked by lymphatic obstruction, e.g. congenital intestinal lymphangiectasia, sarcoidosis lymphoma, mesenteric tuberculosis, and after surgical correction of congenital heart disease with Fontan's operation, mucosal diseases without ulceration, e.g. Menetrier's disease, coeliac disease, eosinophilic gastroenteritis, and immune diseases, e.g. systemic lupus erythematosus or food allergies, primarily to milk.
This represents a human immunoglobulin G (IgG) derived peptide sequence that has a stimulating effect on the fibrinolytic activity of the scuPA/ suPAR complex of the invention. This sequence has similarity to the human IG heavy chain, IG V-III region (HV3T). The invention provides a thrombolytic therapeutic composition for the treatment and prevention of
   New compositions with thrombolytic activity for, e.g. treatment of thromboembolism - comprise complex of single chain urokinase type plasminogen activator, scuPA, and soluble urokinase plasminogen
   Thrombolytic activity; soluble urokinase plasminogen activator receptor; single chain urokinase type plasminogen activator; thromboembolism; scupa; suppar, ig; regulator; fibrinolytic activity; fibrin clot; myocardial infraction; cerebro-vascular event; pulmonary embolism;
  Example 5; Page 24; 46pp; English.
   WPI; 1998-348262/30.
   (HADA-) HADASIT MEDICAL RES SERVICES & DEV
   09-DEC-1996;
  09-DEC-1997;
  18-JUN-1998.
  W09825641-A1
   Misc-difference
  Homo sapiens.
   Synthetic
  deep vein thrombosis; immunoglobulin; human.
  Complex scuPA/suPAR fibrinolytic activity regulating peptide
  06-OCT-1998
   W68167 standard; peptide; 18
  Sequence
  enterocolitis, shigellosis, viral gastroenteritis, parasite infestation, bacterial overgrowth, whipple's disease, diseas
   10
  _
  1 GGLLVQPG 8
  ||| ||||
| gglcvqpg
  receptor,
  æ
  Conservative
  (first entry)
  ΑĀ,
  œ
  96US-0032676
  97WO-IL00402
   Location/Qualifiers
  /note= "unidentified"
   88.1%;
  0
  Score 37; DB 21;
Pred. No. 3.2e+05;
  Mismatches
   Length 8;
  Indels
  diseases with
  0
  Gaps
  0;
```

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Y8450LT
Y84660
ID 466
ID 466
ID 78
AXX Y8
AXX Y8
AXX Y8
AXX Y8
AXX HV
AXX AXI
AXX HV
AXX AXI
A
   δÃ
  888888888888888888
  밁
  Matches
  Query Match
Best Local :
  APC: lymphocyte proliferation; antigen; auto-immune disorder; immune-related disorder; immune system rejection; multiple sclerosis; organ transplantation; inflammatory disease; allergic disease; rheumatoid arthritis; insulin dependent diabetes mellitus; celiac disease; Sjogren's syndrome; systemic lupus erythematosus; auto-immune thyroiditis; idiopathic thrombocytopenic purpura; hemolytic anemia; Grave's disease; Addison disease; autoimmune orapitics; pernicious anemia; vasculitis; pemphigus; rheumatic carditis; myasthenia gravis; polymeuritis; pemphigus; rheumatic carditis; polymeuritis; pemphigus; rheumatic carditis; scleroderma; asthma; sportasis; eczematous dermatitis; respective agreements and sportasis; colorederma; asthma; sportasis; eczematous dermatitis;
   a thromboembolic disorder associated with the formation of fibrin clots. The composition comprises, as the active ingredient, a complex of a single chain urokinase type plasminogen activator (scuPA) and a soluble urokinase plasminogen activator receptor (suPAR). The complex (scuPA) suPAR) has thrombolytic activity under physiological conditions and in the presence of IgG, or of at least 1 IgG-derived peptide, and induces fibrinolysis of fibrin clots. The compositions and complex are useful for the treatment or prevention of thromboembolic disorders associated with the formation of fibrin clots, especially myocardial infractions, cerebro-vascular events, pulmonary embolism and deep vein thrombosis.
   Suppression of antigen presenting cell mediated lymphocyte proliferation, by administering a Zot-related immunoregulator useful for treating immune-related disorders, immune system rejection subsequent to tissue or organ transplantation
   Human; Zot; zonula occludens to APC; lymphocyte proliferation;
  WPI; 2000-271257/23.
  Fasano A,
   09-SEP-1999;
   23-MAR-2000
   N-terminal
  Sequence
  (UYMA-) UNIV MARYLAND BALTIMORE
  WO200015252-A1
  Misc-difference
  Homo sapiens
  25-JUL-2000
   Y84660 standard; peptide; 20
   11
   æ
   1 GGLLVQPG 8
   ggxlvqpg 15
  Zot; zonula occludens toxin; zonulin;
  Similarity 7; Conser
   sarcoma;
   Sztein MB,
  sequence
  18
  Conservative
   (first entry)
  AA;
  98US-0100266
   99WO-US18842
   Location/Qualifiers
  /note= "any amino acid"
   cleroderma; asthma; psoriasis;
inflammatory bowel disease; pi
   of a human zonulin protein of 47
  88.1%;
  Lu R,
   Score 37; DB Pred. No. 1.4; 0; Mismatches
  0
  ₽
  Tanner
  ulin; antigen presenting cell;
auto-immune disorder;
  19;
   ۲
  Length 18
   0,
   Gaps
   0;
```

Disclosure; Page 26;

95pp; English

```
method can be used to down-regulate APC-mediated lymphocyte proliferation
C1 in mammalian hosts suffering from auto-immune or immune-related
C2 disorders, immune system rejection subsequent to tissue or organ
C3 transplantation, or inflammatory or allergic diseases. The autoimmune
C4 transplantation, or inflammatory or allergic diseases. The autoimmune
C5 or immune related disorders include multiple sclerosis, rheumatoid
C6 arthritis, insulin dependent diabetes mellitus, celiac disease,
C7 Sjogren's syndrome, systemic lupus erythematosus, auto-immune
C8 crave's disease, Addison disease, autoimmune orchitis, pernicious
C9 crave's disease, Addison disease, autoimmune orchitis, pernicious
C9 crave's disease, Addison disease, autoimmune orchitis, polymyositis,
C9 polyneuritis, pemphigus, rheumatic carditis, polymyositis,
C9 polyneuritis, and scleroderma. The inflammatory or allergic disease
C9 condisorder is selected from asthma, psoriasis, eczematous dermatitis,
C9 conditions associated with mycotic, viral, parasitic, or bacterial
   Query Match
Best Local
   Matches
   03-AUG-1995 (first entry)
   The present sequence represents the N-terminal of a human zonulin polypeptide. The specification describes a method of suppressing antigen presenting cell (APC)-mediated lymphocyte proliferation in a mammalian host pre-exposed to a particular antigen. The method comprises administering to the host an effective amount of a Zot-related
Protein sequences (R66295-51) are novel human immunoglobulin heavy chain
  DNA fragment comprising human immunoglobulin Vh production of human immunoglobulin in mammalian
  Primer; PCR; amplify; human; immunoglobulin; variable; heavy chain; cosmid; placenta; vector; pJB81; E.coli; mammalian.
   immunoregulator selected from Zot (zonula occludens toxin) or zonulin, the amount effective to down-regulate the activity of the APC. The
  Claim 31; Page 59-60; 130pp; Japanese.
   WPI; 1995-006791/01.
N-PSDB; Q78960.
   10-MAY-1993;
  24-NOV-1994.
   WO9426895-A.
   Human immunoglobulin variable heavy chain #20.
   R66314;
   R66314 standard;
   Honjo T, . Matsuda F;
  (NISB ) JAPAN TOBACCO INC
  10-MAY-1993;
  Homo sapiens
  Sequence
  12.
   œ
   1 GGLLVQPG 8
|| ||||
8 ggxlvqpg 15
  Similarity
7; Conserv
  20
   Conservative
   ξ
  93WO-JP00603
  93WO-JP00603
   Protein; 118
   88.1%;
   Score 37; DB 2
Pred. No. 1.5;
0; Mismatches
  ₿
   21;
   1;
   Length 20;
  genes
hosts
   Indels
  ior
  0
  Gaps
  0
```

밁 S

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RESULT
W00240
  Query Match
Best Local Similarity
"~+~hes 7; Conserva
  밁
   Ş
   sequences encoded by novel isolated genes. The genes (Q78939-79002) were isolated and cloned from a series of cosmid constructs: Y202; Y103; Y21; Y6;Y24; 3-31; M84; M118 and M131, by PCR amplification using primers Q78917-38. The genes are subdivided into 5 families of Vh genes. The fragments cover a region of 800 kb. The DNA fragments were isolated from high molecular weight DNA from human placenta. The DNA was partially digested with TaqI restriction enzyme. The fragments were separated by gel elecrophoresis and 35-45 kb fractions were collected. The fragments were ligated with ClaI-digested cosmid vector pJB81. The ligation products were in vitro packed and infected into E.coli 490A. The fragments were then subcloned by colony hybridisation. The Vh genes and immunoglobulin in mammalian hosts.
  Region
The amino acid sequence (W00240) of (VH) of the epidermal growth factor
                                      Claim
  WPI; 1996-412776/41.
N-PSDB; T33445.
   Key
   Mouse-human chimeric antibody; monoclonal antibody; epidermal growth factor receptor; EGF-R; diagnosis; immunotoxin; immunocytokine; tumour; cancer.
   Murine/human chimeric monoclonal antibody, chMint5 specific for EGF-R - shows a lower immunogenicity when administered to humans
   Ferrer Marsal
   Anastasi AM,
   01-MAR-1995;
   01-MAR-1996;
  06-SEP-1996
   W09627010-A1
  Region
  Region
   Mus musculus
  EGF receptor
   22-NOV-1996
   W00240;
  W00240 standard; Protein; 120 AA.
  Sequence
  (ITUY-) ITAL MIN UNIV RICERCA SCI & TECNOLOGICA.
   13
  27 ggalvqpg
   1 GGLLVQPG
                                    7;
                                   Page 15;
  118 AA;
   Conservative
  chimeric
   (first entry)
   Colnaghi MI,
C, Mele A;
   8
  34
   95IT-0FI0036
  96WO-EP00805
   /label=
  /label- CDR1
   Location/Qualifiers
  /label - CDR2
                                  28pp;
   88.1%;
87.5%;
  MAb chmint5 VH chain.
   CDR3
                                    English
   De
  0;
   Score 37; Pred. No.
   Santis R,
   Mismatches
the heavy chain variable region receptor (EGF-R)-specific mouse
  ဖ
   DB
9.5;
   Di Massimo
  16;
  ٠.
   Length 118
   Indels
  chMint5;
therapy;
  0
  Gaps
  0
```

88888888**x**&

RESULT B53648

밁 Ş

```
also
prevent
disorders,
```

В

8

1 GGLLVQPG 8 ggtlvqpg 15

Similarity 7; Conser

Conservative

0;

Mismatches

0,

Gaps

0

88.1%; 87.5%;

Score 37; Pred. No.

10;

15;

Length 123;

```
Matches
  Query Match
Best Local
  human chimeric antibody chmint5 was deduced from a cDNA clone (T33445) obtd. by PCR amplification of murine Mint5 hybridoma DSM ACC2150 cDNA. chmint5 comprises Mint5 VH and VL regions fused to human C-gammal and CK regions. Constructs were expressed in CHO cell transfectants. chmint5 shows lower immunogenicity than the constructs were expressed in the constructs were expressed in the constructs.
called human colon cancer associated proteins, called human colon cancer antigens, given in B53234 to B54006. The human colon cancer antigens can have cytostatic, cardioactive, muscular; neuroprotective, immunomodulatory, gynaecological, gastrointestinal, vulnerary, nephrotropic, antiinfective and antibacterial activities, and can be used in gene therapy. The colon cancer antigen polynucleotides, proteins and antibodies to the proteins are useful for the prevention, treatment and diagnosis of colon disorders, such as colon cancer. The polynucleotides may be used in diagnostics and research, such as for chromosome identification, and as hybridisation probes. The proteins
  Mint5 when administered to humans. It can be used in diagnostic assays or used to produce immunotoxins or immunocytokines useful
  identification; cytostatic; cardioactive; neuroprotective; vulne. immunomodulatory; muscular; gynaecological; gastrointestinal; nephrotropic; antiinfective; antibacterial; gene therapy; wound; neural disorder; immune system disorder; muscular disorder; reproductive disorder; gastrointestinal disorder; renal disorder
   09-MAR-2001 (first entry)
   B53648 standard; Protein; 121 AA
   Sequence
  Human colon cancer antigen protein sequence SEQ ID NO:1188
   Claim 11; Page 1770; 2104pp; English.
  antigens,
disorders
  12-MAR-1999;
  08-MAR-2000;
   WO200055351-A1
  N-PSDB;
  (HUMA-) HUMAN GENOME
   infectious disease;
   Local Similarity nes 7; Conserv
   œ
  1 GGLLVQPG
   tumour therapy
   ggalvqpg
   2000-587534/55
  cancer associated gene sequences, referred to as colon cancer eas, useful for the treatment, prevention, and diagnosis of co
  colon
  useful for the such as colon
   120 AA;
   Conservative
  cancer; colon
  2000WO-US05883
   15
   8
  99US-0124270
   cardiovascular disorder.
  88.1%;
87.5%;
  SCI INC
   to humans. It can be used in diagnostic
  cancer
  cancer antigen;
   Ç,
  Score 37;
Pred. No.
   Mismatches
  17;
  diagnosis;
  Length 120;
   renal disorder;
   Indels
   vulnerary;
   0,
   of colon
  0
   밁
   Ş
   333333×3
  Ωy
   Matches
  Query Match
Best Local
```

CCCCCCCCCCCX PRETEX PRE

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RESULT
R54811
  Query Match
Best Local Similarity
Conserv
   gastrointestinal disorders, wounds, renal disorders, infectious diseases, and cardiovascular disorders. C98764 to C98772 and Bi represent sequences used in the exemplification of the present
                                  A B-cell superantigen (sAg) is a fragment of SpA D domain that specifically binds the Fab portion of variable region restricted antibodies. The sAg is used to enhance production of VH, especiall vH3, restricted Abs. During attempts to identify sAgs, as sequence (R54784-801) of H chains from Ig reactive with mod-SpA, and as and DNA sequences (R54802-16, Q64842-56) of VH regions of SpA binders obtained from combinatorial libraries were determined.
  Sequence
   system disorders,
   Stimulating prodn. of variable region gene family restricted antibodies - through B-cell super-antigen vaccination
  invention
  Disclosure; Page 103; 130pp; English
   N-PSDB; Q64851.
   Silverman GJ
   30-OCT-1992;
  11-MAY-1994.
  W09409818-A
  SpA domain D;
   SpA-reactive
   18-OCT-1994
   R54811;
   R54811 standard;
Sequence
   WPI; 1994-167127/20
  29-OCT-1993;
  Homo sapiens
  vaccine
  superantigen;
   15
  11 ggxlvqpg 18
  1 GGLLVQPG
  protein-A;
   ) UNIV
  121
    123
  Conservative
   ЧΛ
   (first entry)
   CALIFORNIA.
  Ig binding region; B-cell superantigen; sAg;
heavy chain variable region; VH3 restricted antibody;
; SpA2-08; combinatorial library; B-lymphocyte;
  8
    B
   92US-0969936
  93WO-US10555
   region SpA2-08
   Protein;
   muscular disorders, reproductive disorders
  88.1%;
  0
  Score
Pred.
   B
  Mismatches
  37;
  DB
  1;
  Length 121;
  Indels
   infectious
  especially
  0;
   B54007
  Gaps
  0
```

Search completed: June 13, 2001, 14:14:39 Job time: 380 sec

Con May May a significant of the 
```
Result
  Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   Minimum DB
Maximum DB
   Minimum
  OM protein .
  Database
  Total number of hits satisfying chosen parameters:
   Searched:
  Scoring table:
  Sequence:
   Perfect score:
   Title:
   Run on:
  ö
     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  Score
   seq
   protein search, using sw
   length:
length:
  Query
  Match
   <u>+</u> 3 2 1
   June 13, 2001, 14:10:47; Search time 130.61 Seconds (without alignments) 4.209 Million cell updates/sec
  PIR_67:*
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Gapop 10.0 ,
   PCT-US01-05825A-19
  198801 segs, 68722935 residues
   GenCore version Copyright (c) 1993 - 2000
  GGLLVQPG 8
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pir3: *
pir4: *
  Length
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     DB
  Gapext 0.5
NAMES 
  ij
  SUMMARIES
  model
   4.5
Compugen Ltd
   198801
   ig heavy chain V-I
Ig heavy chain V r
Ig heavy chain V r
Ig heavy chain V-D
cellulase (EC 3.2.
cellulase (EC 3.2.
Ig heavy chain V r
  probable aminotran
  Description
b33 antigen homol
33 antigen homol
y heavy chain v r
  A; Gene: GDB: IGHV@
   A; Molecule type: protein A; Residues: 1-116 <CAP>
   밁
  Ş
  C; Genetics:
  A1HUZP
  A; Gene: PA2394
  A; Status: preliminary
  Nature 406, 959-964, 2000
  Query Match
Best Local Similarity
Matches 8; Conserv
   131 GGLLVQPG 138
   1 GGLLVQPG 8
   N
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| 4.5    | 44             | 43     | 42     | 41     | 40     | 39     | 38          | 37     | 36     | 35     | 34     | 33     | 32     | 31     | 30     |
|--------|----------------|--------|--------|--------|--------|--------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|
| 34     | 34             | 34     | 34     | 34     | 34     | 34     | 34          | 34     | 34     | 34     | 34     | 34     | 34     | 34     | 34     |
| 81.0   | 81.0           |        | 81.0   |        |        |        |             |        |        |        |        |        |        |        |        |
| 105    | 105            | 101    | 101    | 100    | 100    | 100    | 100         | 98     | 98     | 98     | 98     | 86     | 98     | 98     | 98     |
| N      | N              | N      | N      | N      | N      | N      | N           | N      | N      | N      | N      | N      | N      | N      | N      |
| PL0255 | S38488         | PU0002 | PU0003 | S26926 | S26925 | 968698 | PL0122      | S26934 | S26933 | S26889 | S26894 | S26891 | S26932 | S26927 | S29545 |
| heavy  | Ig heavy chain | heavy  | heavy  | heavy  | heavy  | heavy  | heavy       | heavy  | heavy  | heavy  | heavy  | heavy  | heavy  | heavy  | heavy  |
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| H      | ֝֝֝֝<br>ב      | r      | H      | r      | ٠<br>۲ | н      | <u>'-</u> I | H      | ٧<br>۲ | ٧<br>۲ | ٧<br>۲ | 4      | ٧<br>۲ | r      | 4      |
|        |                |        |        |        |        |        |             |        |        |        |        |        |        |        |        |

## ALIGNMENTS

```
RESULT 1

D83347

probable aminotransferase PA2394 [imported] - Pseudomonas aeruginosa (strain | probable aminotransferase PA2394 [imported] - Pseudomonas aeruginosa (c; Species: Pseudomonas aeruginosa (c; Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000 c; Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000 c; Accession: D83347

R; Stover; C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hicke adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbi
   R:Capra, J.D.; Kehoe, J.M.
Proc. Natl. Acad. Sci. U.S.A. 71, 845-848, 1974
A:Title: Yariable region sequences of five human
A:Reference number: A93794; MUID:74142702
A:Accession: A02061
  A;Cross-references: GDB:128528; OMIM:147070
A;Map position: 14q32.33-14q32.33
C;Superfamily: immunoglobulin V region; immunoglobulin homology
   Ig heavy chain V-III region (Zap) - human (tentative sequence)
C;Species: Homo sapiens (man)
C;Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 31-Mar-2000
C;Accession: A02061
  A; Experimental source: strain PAO1 C; Genetics:
  A;Molecule type: DNA
A;Residues: 1-427 <STO>
A;Cross-references: GB:AE004665; GB:AE004091; NID:g9948426; PIDN:AAG05782.1; GSPDB:GN
   C; Comment: This chain was isolated from an IgAl myeloma protein.
   A; Reference number: A82950; A; Accession: D83347
   A; Title: Complete genome sequence of Pseudomonas aeruginosa PA01, A; Reference number: A82950; MUID: 20437337
                                   :Keywords: heterotetramer; immunoglobulin
immunoglobulin homology <IMM>
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   0;
  Length 427;
   Indels
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  an
  P.; Hickey, M.J.;
A.; Larbig, K.; L
  Gaps
  opportunistic
   0;
  the V
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```
A;Cross-references: EMBL:Z18824; NID:g33111; PIDN:CAA79276.1; PID:g939891 C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;15-98/Domain: immunoglobulin homology <IMM>
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C;Species: Homo sapiens (man)
C;Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 23-Jul-1999
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   A;Cross-references: EMBL:Z12335; NID:g32889; PIDN:CAA78205.1; PID:g32890 C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin
  C;Accession: S26929

R;Tomlinson, I.M.; Walter, G.; Marks, J.D.; Llewelyn, M.B.; Winter, G.

J. Mol. Biol. 227, 776-798, 1992

A;Title: The repertoire of human germline V(H) sequences reveals about fifty groups
A;Accession: S26885; MUID:93021117

A;Accession: S26929
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  멍
  S
   A; Molecule type: DNA
A; Residues: 1-98 < TOM>
Ιg
  뫄
   A;Title: Human anti-self antibodies with high specificity from phage A;Reference number: S36256; MUID:93178448 A;Accession: S36282
  R;Griffiths, A.D.; Malmqvist, M.; Marks, J.D.; Bye, J.M.; Embleton, M.J.; McCafferty, JEMBO J. 12, 725-734, 1993
   A; Status: preliminary
   F;22-96/Disulfide bonds:
  A; Molecule type: mRNA
A; Residues: 1-110 <GRI>
  A;Status: preliminary; nucleic acid sequence not shown
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Date: 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 23-Jul-1999
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Best Local
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   Query Match
Best Local
   Matches
   heavy chain V region (DP-33) - human (fragment)
heavy
   Local Similarity nes 7; Conserv
  1 GGLLVQPG 8
|| |||||
8 GGSLVQPG 15
  8 GGVVVQPG 15
  1 GGLLVQPG
   8
   1 GGLLVQPG
chain V-D-J region -
                                   U
   GGALVQPG
  7; Conserv
   Conservative
   Conservative
  Conservative
  œ
   #status predicted
   88.1%;
87.5%;
  85.7%;
  85.7%;
75.0%;
   0,
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   Score 37; Pred. No.
  Score 36; DB 2;
Pred. No. 4.1;
  Score 36; I
Pred. No. 3.
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   Mismatches
   Mismatches
  3.6
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2.7
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   Length 110;
   Length 98;
  Indels
   Indels
   0;
   0
  0;
   Gaps
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   0
  RESULT
S61447
   В
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  Matches
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C;Accession: T06350

R;Lashbrook, C.C.; Gonzalez-Bosch, C.; Bennett, A.B.
Plant Cell 6, 1485-1493, 1994

A;Title: Two divergent endo-beta-1,4-glucanase genes
A;Reference number: Z15614; MUID:95086382

A;Accession: T06350
   A;Cross-references: EMBL:x83711
C;Superfamily: Arabidopsis membrane-anchored cellulase KOR
C;Keywords: glycosidase; hydrolase
  R;Ferrarese, L.; Trainotti, L.; Moretto, P.; Polverino de Laureto, P.; Rascio, N.; Plant Mol. Biol. 29, 735-747, 1995
A;Title: Differential ethylene-inducible expression of cellulase in pepper plants.
A;Reference number: S61445; MUID:96128016
   cellulase (EC 3.2.1.4) CX3 - pepper (fragment)
C;Species: Capsicum annuum (pepper)
C;Date: 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 08-Dec-2000
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Best Local Similarity
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   A;Cross-references: EMBL:231387; NID:g472965; PIDN:CAA83262.1; PID:g940522 C;Superfamily: immunoglobulin V region; immunoglobulin homology C;Keywords: heterotetramer; immunoglobulin F;15-98/Domain: immunoglobulin homology <IMM>
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   A; Molecule type: DNA
A; Residues: 1-120 <HAW>
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A; Accession: $44111
  submitted to the EMBL Data Library, March 1994 A;Description: Idiotypic vaccination against human B-cell lymphoma :rescue of variabl
  C;Date: 30-Apr-1999 #sequence_revision 30-Apr-1999 #text_change 08-Dec-2000
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   A; Molecule type: mRNA
A; Residues: 1-489 <LAS>
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Genetics:
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  1 GGLLVQPG
   8 GGVVVQPG
   R.E.;
   6; Conserv
   Conservative
   Conservative
   15
  D.; Ovecka, M.; Winter,
  85.7%;
75.0%;
   85.7%;
75.0%;
   Score 36; DB Pred. No. 12; 2; Mismatches
   2;
   2;
  Score 36; DB
Pred. No. 4.4;
  (tomato).
   shown
   Mismatches
                     tissue-type
  DB
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  ິດ.
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   2;
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   Hamblin,
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  Length 120
  Length 324;
   exhibit
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   Indels
   Indels
  T.J.;
  overlapping
   0
   0;
   Gaps
   Gaps
   expression
   0
   0
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Ig heavy chain V region (10-25) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 31-Jul-1989 #sequence_revision 31-Jul-1989 #text_cha
C;Accession: F31485
R;Bedzyk, W.D.; Johnson, L.S.; Riordan, G.S.; Voss Jr., E.W.
J. Biol. Chem. 264, 1565-1569, 1989
A;Title: Comparison of variable region primary structures wi
A;Reference number: A31485; MUID:89109167
A;Accession: F31485
   C;Function: C;Function: Aydrolysis of 1,4-beta-D-glucosidic linkages in beta-D-glucans A;Pathway: cellulose degradation
A;Pathway: cellulose degradation
C;Superfamily: Arabidopsis membrane-anchored cellulase KOR
C;Keywords: glycosidase; hydrolase; polysaccharide degradation
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-489/Product: cellulase 2 #status predicted <MAT>
  Ig heavy chain V region (S107/VH11 group 2-18) - mouse (fragment) C:Species: Mus musculus (house mouse) C:Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 0 C:Accession: PT0380
  ş
   A; Molecule type: protein A; Residues: 1-32 <BED>
   Š
   Query Match
Best Local Similarity
Thes 7; Conserve
   C;Superfamily: immunoglobulin V region; immunoglobulin C;Keywords: heterotetramer; immunoglobulin F;15-100/Domain: immunoglobulin homology <IMM>
  A; Molecule type: DNA A; Residues: 1-123 <B C; Superfamily: immun
  R:Behar, S.M.; Lustgarten, D.L.; Corbet, S.; Scharff, M.D.
J. Exp. Med. 173, 731-741, 1991
A:Title: Characterization of somatically mutated S107 VH11-encoded A;Reference number: pT0376; MUID:91147903
A:Accession: PT0380
RESULT
   밁
  A; Status: preliminary
   용
  용
   S
   RESULT
  Query Match
Best Local S
Matches 6
   :Superfamily: immunoglobulin V
:Keywords: heterotetramer; immu
   Matches
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  327
  Local Similarity
nes 6; Conserv
10
   8
   1 GGLLVQPG 8
   8
   1 GGLLVQPG 8
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   ω
   GGNLVQPG
  |||:|:||
|GGLIVKPG 334
  GGLLVQPG
   GGDLVQPG
  1-123 <BEH>
   Similarity 7; Conserv
   Conservative
   Conservative
  Conservative
   15
  8
   81.0%;
87.5%;
   83.3%;
  85.7%;
75.0%;
   in V region; immunoglobulin homology
immunoglobulin
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   0;
  'n
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   Mismatches
  structures within
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  2;
  #text_change
   <u>ب</u>
  0;
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  Length 489
   Length 123
  homology
   Indels
   Indels
  30-May-1997
   07-May-1999
  an
  0;
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  anti-DNA autoantibod
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   Gaps
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C;Species: Mus musculus (house mouse)
C;Date: 19-Mar-1997 #sequence_revision 24-Jul-1997 #text_change
C;Accession: S33402; S36385
R;Kettleborough, C.A.; Saldanha, J.; Ansell, K.H.; Bendig, M.M.
Eur. J. Immunol. 23, 206-211, 1993
A;Title: Optimization of primers for cloning libraries of mouse
A;Reference number: S33391; MUID:93122092
   Ig heavy chain V regions (3-24 and 5-14) - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Date: 31-Jul-1989 #sequence_revision 31-Jul-1989 #text_change 30-May-1997
C:Accession: D31485
                 C;Accession: A27606
R;Currier, S.J.; Gallarda, J.L.;
J. Immunol. 140, 1651-1659, 1988
A;Title: Partial molecular genet:
   Ig heavy chain V-a region (p26.9p2) - rabbit (fragments) C;Species: Oryctolagus cuniculus (domestic rabbit) C;Date: 08-Mar-1989 #sequence_revision 30-Jun-1991 #text
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A27606
  A;Cross-references: EMBL:X73019
C;Superfamily: immunoglobulin V region; immunoglobulin homology
C;Reywords: heterotetramer; immunoglobulin
F;1-38/Domain: immunoglobulin homology (fragment) <IMM>
   C; Keywords: het F; 1-38/Domain:
   submitted to the EMBL Data Library, April 1993 A; Reference number: S36376
   A;Cross-references: EMBL:X73019
A;Experimental source: strain B;
  A;Reference number: S33391;
A;Accession: S33402
A;Molecule type: mRNA
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S33402
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   R:Bedzyk, W.D.; Johnson, L.S.; Riordan, G.S.; Voss Jr., E.W. J. Biol. Chem. 264, 1565-1569, 1989
A;Title: Comparison of variable region primary structures within A;Reference number: A31485; MUID:89109167
A;Accession: D31485
  A; Reference number:
  A; Molecule type: mRNA
A; Residues: 1-30 < ANS>
  A; Reference number: A; Accession: S36385
  R;Ansell, K.H.
   A; Residues: 1-36 <BED>
  A;Status: preliminary
   A; Residues: 1-38 <KET>
   Ig heavy chain V region -
   Query Match
Best Local S
Matches 7
  Matches
   Query Match
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  σ
   æ
   1 GGLLVQPG
  11
  1 GGLLVQPG 8
  GGGLVQPG 13
   GGGLVQPG 15
   Similarity 7; Conserv
   Similarity 7; Conserv
  Gallarda, J.L.; Knight,
  Conservative
   Conservative
   æ
  81.0%;
87.5%;
   81.0%;
87.5%;
   mouse (fragment)
genetic map of the rabbit V-H chromosomal region; MUID:88154464
  BALB/c
  0
  Score 34; DB
Pred. No. 3.3;
   Score 34;
Pred. No. 3
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  K.L.
   DB
3.5;
  2;
  2
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  Length 38;
  Length 36
  Indels
  homology
   Indels
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   17-Jul-1998
   ç
   0
   an anti-fluorescein
   Gaps
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   genes
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submitted to the EMBL Data Library, April 1993
A; Reference number: $36376
A; Reference number: $36376
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R; Kettleborough, C.A.; Saldanha, J.; Ansell, K.H.; Bendig, M.M.
Eur. J. Immunol. 23, 206-211, 1993
A; Title: Optimization of primers for cloning libraries of mouse immunoglobulin A; Reference number: $33391; MUID:93122092
A; Reference number: $33391; MUID:93122092
A; Rocession: $33396
A; Accession: $33391; MUID:93122092
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A; Experimental source: strain BALB/C
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C; Keywords: heterotetramer; immunoglobulin
F; 14-59/Domain: immunoglobulin homology (fragment) <IMM>
   A; Molecule type: DNA
A; Residues: 1-59 < CUR>
A; Residues: 1-59 < CUR>
A; Cross-references: GB:M19706
A; Note: the authors translated the codon TCC for residue 28 as Asp C; Genetics:
A; Introns: 30/3
C; Superfamily: immunoglobulin V region; immunoglobulin homology C; Keywords: heterotetramer; immunoglobulin
   Ig heavy chain V region - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 23-Jul-1999
C;Accession: $36381; $33396
R;Ansell, K.H.
  Ig heavy chain V region - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Date: 19-Mar-1997 #sequence_revision 29-Aug-1997 #text_change 23-Jul-1999
C:Accession: S36382; S33397
R:Ansell, K.H.
   RESULT
S36381
  Ş
A;Cross-references: EMBL:X73011; NID:g295878; PIDN:CAA51497.1; PID:g939940 R;Kettleborough, C.A.; Saldanha, J.; Ansell, K.H.; Bendig, M.M. Eur. J. Immunol. 23, 206-211, 1993 A;Title: Optimization of primers for cloning libraries of mouse immunoglobulin genes us1 A;Reference number: S33391; MUID:93122092 A;Accession: S33397
  A; Reference number: A; Accession: S36382
  submitted to the EMBL Data Library, April 1993 A; Reference number: S36376
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   밁
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A; Residues: 1-60 < ANS>
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Matches 7; Conserv
   Query Match
   Query Match 81.0
Best Local Similarity 87.0
Matches 7; Conservative
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  1 GGLLVQPG 8
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  1 GGLLVQPG 8
   GGGLVQPG 15
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  81.0%;
87.5%;
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   0
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Pred. No.
  Score 34;
Pred. No. 5
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  2
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   Length 59;
  Length
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  Indels
  59
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  0;
  Gaps
   Gaps
  0;
  0;
   genes
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```
A; Molecule type: mRNA
A; Residues: 1-82 <SAN>
A; Cross-references: GB:M26996
A; Ote: the sequence shown differs from the authors' translation
C; Superfamily: immunoglobulin V region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
  A;Molecule type: mRNA
A;Residues: 1-33 <KET>
A;Cross references: EMBL:x73011
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A;Experfamily: immunoglobulin V region; immunoglobulin homology
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F;8-60/Domain: immunoglobulin homology (fragment) <IMM>
   C;Accession: C34964
R;Sanz, I.; Casali, P.; Thomas, J.W.; Notkins, A.L.; Capra, J.D.
J. Immunol. 142, 4054-4061, 1989
A;Title: Nucleotide sequences of eight human natural autoantibody V-H regions reveals A;Reference number: A92830; MUID:89235232
A;Accession: C34964
   Ig heavy chain precursor V-III region (Ab21) - human
C; Species: Homo sapiens (man)
C; Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 09-May-1997
  Query Match
Best Local Similarity
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  밁
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   Query Match
Best Local Similarity
7; Conserv
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Search completed: June 13, 2001, Job time: 148 sec
  27
   1 GGGLVQPG
  \vdash
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  81.0%;
87.5%;
   81.0%;
                     14:10:47
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   Score 34;
Pred. No. 7
  Score 34; D
Pred. No. 5.
   Mismatches
  Mismatches
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  1;
   1:
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   Length 82;
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   after residue
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   0
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   56
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Result
No.
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Maximum Match 100%
Listing first 45 summaries
   Minimum DB
Maximum DB
  Run
  Database
   Total number of
   Scoring table:
  Sequence:
  Perfect score:
   Title:
  OM protein - protein search, using sw model
  on:
     332365433
   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
  Score
   seq
   length:
   9
Query
Match
  hits satisfying chosen parameters:
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  PCT-US01-05825A-19
  SwissProt_39:*
   93435 seqs, 34255486 residues
  Gapop 10.0 , Gapext 0.5
  June 13,
  GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
  GGLLVQPG
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3.681 Million cell updates/sec
  8
          HV30_HUMAN
HV27_MOUSE
HV28_MOUSE
HV29_MOUSE
HV30_MOUSE
HV31_MOUSE
HV31_MOUSE
HV31_HUMAN
HV36_MOUSE
HV38_HUMAN
HV36_MOUSE
HV38_HUMAN
HV37_HUMAN
HV41_MOUSE
HV38_HUMAN
HV41_MOUSE
HV38_HUMAN
HV41_MOUSE
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HV41_MOUSE
HV38_HUMAN
HV40_MOUSE
HV38_HUMAN
HV38_HUMAN
HV38_HUMAN
HV30_HUMAN
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HV30_HUMAN
HV31_MOUSE
HV38_HUMAN
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HV30_HUMAN
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HV31_MOUSE
  SUMMARIES
  P01809
P80419
P01807
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| 45          | 44          | 43          | 42          | 41          | 40          | 39                                            | 38          | 37          | 36         | 35         | 34          |
|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------------------|-------------|-------------|------------|------------|-------------|
| ω<br>ü      | 34          | 34          | 34          | 34          | 34          | . 34                                          | 34          | 34          | 34         | 34         | 34          |
| 78.6        | 81.0        | 81.0        | 81.0        | 81.0        | 81.0        | 81.0                                          | 81.0        | 81.0        | 81.0       | 81.0       | 81.0        |
| 115         | 1185        | 1183        | 403         | 238         | 144         | 142                                           | 136         | 123         | 123        | 123        | 123         |
| <b>-</b>    | _           | _           | ₽           | -           | 1           | <u>, , , , , , , , , , , , , , , , , , , </u> | ۳           | <b>_</b>    | μ          | ۳          | 1           |
| HV3F_HUMAN  | DRPL_HUMAN  | DRPL_RAT    | YCOA_SYNP7  | Y457_CHLTR  | HV26_MOUSE  | HV01_RAT                                      | HV16_MOUSE  | HV25_MOUSE  | HV24_MOUSE | HV23_MOUSE | HV22_MOUSE  |
| P01767      | P54259      |             |             | 084463      | P01795      | P01805                                        | P01783      |             |            |            |             |
| homo sapien | homo sapien | rattus norv | synechococc | chlamydia t | mus musculu | rattus norv                                   | mus musculu | mus musculu |            |            | mus musculu |

## ALIGNMENTS

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RESULT 1
HV3Q_HUMAN
ID HV3Q_H
AC P01778
DT 21-JUL
DT 15-JUL
DT 24-JUL
DT 24-JUL
DT 26-Mammal
OX NCBL[]
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RX MEDLIP
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DR HSSP;
DR HSSP;
DR INTER
DR Pfam;
KW Innunn
FT NON_T
  Query Match
Best Local S
Matches 7
   HV30_HUMAN STANDARD; PRT; 110 MA.
P01778;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG HEAVY CHAIN V-ILII REGION ZAP.
SEQUENCE FROM N.A. MEDLINE-81013937; PubMed-6251474; Bernard O., Gough N.M.;
   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
  PO1804;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
IG HEAVY CHAIN V-III REGION HPC76 (FRAGMENT).
   SCOOM
  InterPro: IPRO03006; -. Pfam; PF00047; 19; 1. Immunoglobulin V region. NON_TER 116 116 SEQUENCE 116 AA; 12582 MW;
  PROTEIN.
PIR; A02061; A1HUZP.
HSSP; P01772; 2IG2.
  MEDLINE=74142702; PubMed=4522793;
Capra J.D., Kehoe J.M.;
"Variable region sequences of five human immunoglobulin heavy chains
of the VH3 subgroup: definitive identification of four heavy chain
   hypervariable regions.";
Proc. Natl. Acad. Sci. U.S.A. 71:845-848(1974).
-!- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM AN IGAl MYELOMA
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
  HV35_MOUSE
   SEQUENCE
   NCBI_TaxID=9606;
  Homo sapiens (Human)
   1 GGLLVQPG 8
|| |||||
8 GGALVQPG 15
   Local Similarity
  Conservative
  STANDARD;
   88.1%;
87.5%;
  0;
   Score 37; Pred. No.
  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
  PRT;
  892F8C217CEC9865 CRC64;
  Mismatches
  111
  DB 1;
  A
  ۲.
  Length 116;
  Indels
  0
  Gaps
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0;

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RESULT 4
HV28_MOUSE
ID P01797
AC P01797
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DT 15-JUL
DT 15-JUL
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HV27_MC
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Matches 7
   Query Match
Best Local
   Matches
  HV28_MOUSE
P01797;
   NON_TER
NON_TER
SEQUENCE
   "Nucleotide sequence of immunoglobulin heavy chain joining segments between translocated VH and mu constant regions genes.";
Proc. Natl. Acad. Sci. U.S.A. 77:1630-3634(1980).
-I- MISCELLANEOUS: THE SEQUENCE OF THE FIRST 197 RESIDUES OF THE C REGION WAS ALSO DETERMINED & DIFFERS IN ONLY 3 POSITIONS FROM TI CORRESPONDING PORTION OF THE MOUSE MOPC 104E MU CHAIN.
PIR: A02074; MHMS76.
InterPro; IPR003006; -.
  NON_TER
SEQUENCE
   MEDITARE-78158406; PubMed-417344;
Vrana M., Rudikoff S., Potter M.;
"Sequence variation among heavy chains
  Eukaryota; Metazoa; Mammalia; Eutheria; NCBI_TaxID=10090;
                    21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION U61.
  21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION A4.
  HV27_MOUSE
P01796;
  Mus musculus (Mouse)
Eukaryota; Metazoa;
   DISULFID
   proteins.
  SEQUENCE
  Mus musculus (Mouse)
  Pfam; PF00047; 1g; 1.
Immunoglobulin V region.
  InterPro;
   nterPro; in 1; 1. fam; PF00047; ig; 1. fam; PF00041in V region.
   1 GGLLVQPG 8
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   MISCELLANEOUS:
   A93818; AVMSAB.
   GGGLVQPG
   GGGLVQPG 10
  GGLLVQPG 8
  Natl. Acad. Sci. U.S.A. ISCELLANEOUS: THIS CHAIN
  Similarity 87.5%;
7; Conservative
  Similarity
7; Conserv
  IPR003006; -.
  INULIN
   113
113
  111
111 AA;
   Conservative
   15
  AA;
  STANDARD;
   STANDARD;
  113
12675
  111
12304 MW;
   Chordata;
Rodentia;
 Chordata;
   81.0%;
87.5%;
   ₩.
  Score 34; DB
Pred. No. 5.3;
0; Mismatches
   0,
  Score 34; DB Pred. No. 5.3; 0; Mismatches
   0,
   ВУ
   WAS
   Craniata;
  75:1957-1961(1978).
   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
   PRT;
  0EDE98EC7348056A CRC64;
  76658C121C598285
   SIMILARITY
   ISOLATED FROM A MYELOMA PROTEIN THAT
  on update)
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   DB
5.3;
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   Vertebrata;
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   inulin-binding myeloma
   Length 113;
  Length 111;
  CRC64;
   Euteleostomi;
  0;
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  RESULT 6
HV30_MOUSE
ID HV30_MOUSE
AC P01799;
DT 21-JUL-1986
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  Query Match
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Matches 7
   PIR; C93818; AVVISO9.
Interpro; IPR003006; -.
Pfam; PF00047; 19; 1.
Immunoglobulin V region.
22 98
  "Sequence";
proteins.";
Proc. Natl. Acad. Sci. U.S.A.
-i- MISCELLANEOUS; THIS CHAIN
BINDS INLIN.
BINDS INLIN.
   NON_TER
SEQUENCE
   DISULFID NON_TER
   Eukaryota; Metazoa;
Mammalia; Eutheria;
  21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION E109.
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PIR; B93818; AVMS61.
   SEQUENCE
   SEQUENCE
  Mus musculus (Mouse).
   proteins.
  MEDLINE=78158406; PubMed=417344;
Vrana M., Rudikoff S., Potter M.
  NCBI_TaxID=10090;
  Pfam;
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  InterPro; IPR003006; -. Pfam; PF00047; ig; 1. Immunoglobulin V region. DISULFID 22 98
  -1- MISCELLANEOUS:
  Sequence variation among
  8
   1 GGLLVQPG
   8
  GGGLVQPG
   GGLLVQPG 8
   GGGLVQPG 15
  Natl. Acad.
   Similarity 7; Conser
  Similarity 87.17; Conservative
   113 AA;
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                     STANDARD;
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  Sci. U.S.A. : THIS CHAIN
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  Chordata;
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   81.0%;
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87.5%;
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                      PRT;
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MEDLINE-78158406; PubMed-417344;
Vrana M., Rudikoff S., Potter M.;
"Sequence variation among heavy chains from inulin-binding
  Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
NCBI_TaxID=10090;
[1]
   Potter M.; ong heavy chains from inulin-binding
   pred. No. 5.3;
0; Mismatches
  Score 34;
Pred. No.
  75:1957-1961(1978)
WAS ISOLATED FROM
  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
   75:1957-1961(1978). WAS ISOLATED FROM A
   EE50F2F20EDB129B
  76634C121C598285 CRC64;
  Mismatches
  SIMILARITY
  SIMILARITY
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   113 AA.
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   5.3;
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  Length 113;
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   CRC64;
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SEQUENCE
  MEDLINE-81216632; PubMed-6787122;
Rudikoff S., Potter M.;
"Immunoglobulin heavy chains from anti-inulin myeloma evidence for a new heavy chain joining segment.";
J. Immunol. 127:191-194(1981).
-i- MISCELLANEOUS: THIS CHAIN WAS ISOLATED FROM A MYEI
  MEDLINE-77134726; PubMed-402936;
Vrana M., Rudikoff S., Potter M.;
"Heavy-chain variable-region sequence
   InterPro; IPR003006; -. Pfam; PF00047; 1g; 1. Immunoglobulin V region
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
  21-JUL-1986 (Rel.
01-OCT-1993 (Rel.
15-JUL-1999 (Rel.
  InterPro; IPR003006; -. Pfam; PF00047; ig; 1. Immunoglobulin V region.
  21-JUL-1986 (Rel. 01, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update) IG HEAVY CHAIN V-III REGION ABE-47N.
   Biochemistry 16:1170-1175(1977).
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
  Mus musculus (Mouse)
  DISULFID
  SEQUENCE.
  NCBI_TaxID=10090;
   Mus musculus (Mouse)
  SEQUENCE
  NCBI_TaxID=10090;
  HV31_MOUSE
  HEAVY CHAIN V-III REGION T957.
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  BINDS
   BINDS INULIN
  A90400; AVMSB7.
  GGLLVQPG
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  GGGLVQPG 15
  7; Conserv
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   V region.
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38, Last annotation update)
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12675 MW;
   THIS CHAIN WAS
   81.0%;
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  81.0%;
87.5%;
   ¥;
   Score 34; DB Pred. No. 5.3; 0; Mismatches
  Score 34; DB Pred. No. 5.3; 0; Mismatches
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   26618F626B59859E CRC64;
   76658C16C779845E
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InterPro; IPR003006; -.
Pfam; PF00047; 1g; 1.
Immunoglobulin V region.
DISULFID 22 BBY
NON_TER 113 113
SEQUENCE 113 AA; 12691 MW;
  PIR; C92811; AVM506.
Interpro; IPG003006; -.
Pfam; PF00047; 19; 1.
Immunoglobulin V region.
DISULFID 22 98
NON_TER 115 115
SEQUENCE 115 AA; 12810
   PO1803;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V RECION AMPCI
  PO1801;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION J606.
  MEDLINE-81216632; PubMed-6787122;
Rudikoff S., Potter M.;
"Immunoglobulin heavy chains from anti-inulin myeloma evidence for a new heavy chain joining segment.";
J. Immunol. 127:191-194(1981).
  MEDLINE-82099361; PubMed-6798111;
Johnson N., Slankard J., Paul L.,
"The complete V domain amino acid
binding proteins."
   Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=10090;
   MOUSE
   J. Immunol. 128:302-307(1982).
   SEQUENCE
  Mus musculus (Mouse)
  SEQUENCE
   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
   Mus musculus (Mouse).
  HV34_MOUSE
  ÷
   NCBI_TaxID=10090;
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  1 GGLLVQPG
  BINDS INULIN.
  BINDS INULIN
   MISCELLANEOUS: THIS
  MOUSE
   GGGLVQPG
  Similarity 87. 7; Conservative
  Similarity 87.17; Conservative
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   STANDARD;
  STANDARD;
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12810
  Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae; Mus
         81.0%;
   81.0%;
87.5%;
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Score 34; DB Pred. No. 5.4; 0; Mismatches
  Score 34; DB
Pred. No. 5.3;
0; Mismatches
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   PRT;
   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
  B67AD6638A121A5F
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PIR; A02048; H3HUTL.

InterPro; IPR03006; -.

Pfam; PF00047; 19; 1.

Immunoglobulin v region.

115 115

TER 1A; 12356 MW;
   MOUSE
   MEDLINE-82099361; PubMed-6798111;
Johnson N., Slankard J., Paul L.,
"The complete V domain amino acid
   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
NCBI_TaxID=10090;
   MEDLINE-78005528; PubMed-409716;
Wang A.-C., Wang I.Y., Fudenberg H.H.;
Wang A.-C., Wang I.Y., Fudenberg H.H.;
Immunoglobulin structure and genetics. Identity between variable regions of a mu and a gamma2 chain.;
J. Blol. Chem. 252:7192-7199(1977).
-i- MISCELLANEOUS: THE SEQUENCES OF THE V REGIONS OF THE HEAVY CHAINS OF IGH AND IGG2 ISOLATED FROM A SINGLE PATIENT WITH BICLONAL GAMMOPATHY ARE IDENTICAL. THEIR LIGHT CHAINS ARE APPARENTLY ALSO
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCBI_TaxID-9606;
  NON_TER
SEQUENCE
  J. Immunol. 128:302-307(1982).
   P01802;
  InterPro; IPR003006; -.
Pfam; PF00047; ig; 1.
Immunoglobulin V region.
  PIR; D92811;
  pinging
   - | - MISCELLANEOUS: THIS
  Johnson N., Slankard J., Paul
"The complete V domain amino
  SEQUENCE
   DISULFID
   11-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
1G HEAVY CHAIN V-III REGION W3082.
   Homo sapiens (Human)
   21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update).
5-JUL-1999 (Rel. 38, Last annotation update
IG HEAVY CHAIN V-III REGION TIL.
  HV3D_HUMAN
  œ
  BINDS INULIN
   MOUSE
  GGLLVQPG 8
  GGGLVQPG 15
  proteins."
   Similarity
   22
115
115 AA;
   Conservative
   AVMS82.
  STANDARD;
  STANDARD;
   98 E
115
; 12887 MW;
   81.0%;
   Score 34; DB Pred. No. 5.4; O; Mismatches
  0
   ВΥ
  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
  PRT;
  PRT;
  9B4517648C121C5A CRC64;
             4DCC67D179F62326 CRC64;
   SIMILARITY
   Hood L.;
sequences
  ISOLATED FROM A MYELOMA PROTEIN THAT
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   Length 115;
   Indels
  myeloma inulin-
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   RESULT 13
HV3R_HUMAN STANDARD; PRT; 1
ID HV3R_HUMAN STANDARD; PRT; 1
AC P01779;
DT 21-JUL-1986 (Rel. 01, Created)
DT 21-JUL-1986 (Rel. 01, Last sequence up
DT 15-JUL-1999 (Rel. 38, Last annotation
DE IG HEAVY CHAIN V-III REGION TUR.
  RESULT 12
HV36_MOUSE
  RN OCC OCC DIT DAC
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   Query Match
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   Matches
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  **MOULINE=82059449; PubMed=6795591; Ollo R., Auffray C., Sikorav J.-L., Rougeon F.; **Mouse heavy chain variable regions: nucleotide sequence of germ-line VH gene segment."; Nucleic Acids Res. 9:4099-4109(1981).
   PO1806;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-1999 (Rel. 38, Last annotation
IG HEAVY CHAIN V REGION 441 PRECURSOR.
   NON_TER
SEQUENCE
   InterPro; IPRO03006; -
Ffam; PF00047; 1g; 1.
Immunoglobulin V region;
   the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
   NCBI_TaxID=10090;
   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae
  This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBI
   EMBL; V00774; CAA24152.1; PIR; A02076; HVMS44.
   or send an email to license@isb-sib.ch).
  Mus musculus (Mouse).
NCBI_TaxID=9606;
                          Homo sapiens (Human).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
  HSSP; P01810; 2FBJ
   26 GGGLVQPG
  8 GGGLVQPG
  1 GGLLVQPG
  GGLLVQPG
   MOUSE
  l Similarity
7; Conserv
  Similarity 7; Conserv
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   STANDARD;
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   116
12911 MW;
   81.0%;
   81.0%;
87.5%;
   Signal
   0
   Score 34; I
Pred. No. 5.
   Score 34;
Pred. No. 5
  IG HEAVY CHAIN V REGION 441.
                             Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
  6B4FF3EF9A95D9F3 CRC64;
   Mismatches
  Mismatches
   116
  update)
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   update)
  There are no restrictions on ong as its content is in no
  DB
   DB 1;
5.5;
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   1;
   Muridae;
  Length 115;
  Length 116
  Indels
   Euteleostomi;
  EMBL outstation
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   collaboration
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RESULT 15
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   SO CCC CCC RTT RAX
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   Query Match
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   SEQUENCE.

MEDILINE-74142702; PubMed-4522793;

Capra J.D., Kehoe J.M.;

"Variable region sequences of five human immunoglobulin heavy chains of the vH3 subgroup: definitive identification of four heavy chain hypervariable regions.";

Proc. Natl. Acad. Sci. U.S.A. 71:845-848(1974).

Proc. Natl. Acad. Sci. U.S.A. ISOLATED FROM AN IGAI MYELOMA
  InterPro: IPRO03006; -.

Pfam; PF00047; 1g; 1.

Immunoglobulin V region.

NON_TER 116 116

SEQUENCE 116 AA; 12431 MW;
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Immunoglobulin v region.
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SEQUENCE 116 AA; 12730 MW;
  MEDLINE-75059123; PubMed-4803843;
MEDLINE-75059123; PubMed-4803843;
MEDLINE-75059123; Parikol H.U., Horn J., Bertram J., Hilschmann N.;
Matanabe S., Barnikol H.U., Horn J., Bertram J., Hilschmann N.;
"The primary structure of a monoclonal IgM-immunoglobulin (mu-
(macroglobulin Gal.), II: the amino acid sequence of the H-chain (mu-
type), subgroup H III. Architecture of the complete IgM-molecule.";
type), subgroup H III. Architecture of the complete IgM-molecule.";
type) subgroup H III. Architecture of the complete IgM-molecule.";
   Submitted (JUN-1975) to the PIR data -1- MISCELLANEOUS: THIS MU CHAIN WAS
  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
  PIR; A02064; M3HUGL.
HSSP; P01772; 2IG2.
  21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-JUL-199 (Rel. 38, Last annotation
IG HEAVY CHAIN V-III REGION GAL.
   NCBI_TaxID-9606;
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   HV3T_HUMAN
  PIR; A02062; A1HUTU.
  REVISION TO THE COMPOSITION OF 28-33.
   SEQUENCE
  8
  B
  I GGLLVQPG 8
GGDLVQPG 15
   MACROGLOBULIN
   GGLLVQPG 8
   GGGLVQPG 15
  Similarity
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   Conservative
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   Score 34; I
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   Mismatches
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   116 AA
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Search completed: Job time: 808 sec

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2001, 14:21:48

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  Query Match
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  NON_TER
   InterPro; IPR003006; -.
Pfam; PF00047; ig; 1.
Immunoglobulin V region.
  "Amino acid sequence of a mouse myeloma immunoglobin heavy chain (MOPC 47 A) with a 100-residue deletion.";
J. Biol. Chem. 254:11418-11430(1979),
-1- MISCELLANEOUS: THIS ALPHA CHAIN WAS ISOLATED FROM A MYELOMA PROTEIN THAT CONTAINS ONE LIGHT AND ONE HEAVY CHAIN PER MOLECULE, LINKED BY A DISULFIDE BOND. IN CONTRAST, NORMAL MOUSE IGA MOLECULES CONTAIN TWO LIGHT AND TWO HEAVY CHAINS AND LACK A LIGHT-HEAVY CHAIN DISULFIDE BOND.
   Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
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21-JUL-1996 (Rel. 01, Last sequence update)
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  Minimum
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   PCT-US01-05825A-19
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   GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd
  GGLLVQPG 8
  sp_phage: *
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   Q96547 capsicum an Q96547 capsicum an Q42872 lycopersico Q9qv16 rattus sp. Q9ulb6 homo
   Q9u1b6 homo sapien
Q9u191 homo sapien
Q9u172 homo sapien
Q9pjt5 chlamydia m
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| 5      | 44     | 3      | 42     | 1           | 0         | 39     | 38     | 37     | 36     | 35     | 34          | ü      | 32     | 31         | 30       | 29     | 28     | 27     | 26     | 25     | 24            | 23          | 22     | 21         | 20          |
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| N      | տ      | 4      | 13     |             |           | Ŋ      |        |        |        |        |             |        |        |            |          |        | S      |        |        |        | 10            |             |        |            | N           |
| 086560 | 009971 | 095458 | Q9PVF5 | Q9Y2J3      | д9ЛVХВ    | Q9JXZ2 | Q9UF82 | Q06573 | Q52169 | 057794 | 030223 .    | Q9YA73 | Q9VEH2 | Q06783     | . Q9U176 | Q9NEE8 | Q06452 | 60AN60 | 095072 | 0      | ) Q9SVJ4      |             | _      | Q9YCE2     | Q9XAL6      |
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| 086560 | Q09971 | 095458 | Q9pvf5 | Q9y2j3      | Q9jvx8    | Q9jxz2 | Q9uf82 | Q06573 | 052169 | 057794 | 030223      | Q9ya73 | Q9veh2 | Q06783     | Q9u176   | Q9nee8 | Q06452 | Q9nvq9 | 095072 | Q9s2d9 | Q9svj4        | Q10923      | Q20338 | Q9yce2     | Q9xal6      |
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## ALIGNMENTS

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Q43751;
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01-NOV-1996;
01-NOV-1996;
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MEDLINE=98247330; PubMed=9572972;

Kim K.S., Lilburn T.G., Renner M.J., Breznak J.A.;

"arfI and arfII, two genes encoding alpha-L-arabinofuranosidases in Cycophaga xylanolytica.";

Appl. Environ. Microbiol. 64:1919-1923(1998).

-i- CATALYTIC ACTIVITY: HYDROLYSIS OF TERMINAL NON-REDUCING ALPHA-L-ARABINOFURANOSIDE RESIDUES IN ALPHA-L-ARABINOSIDES.

EMBL; AF028018; AAC38456.1; -.

Hydrolase; Glycosidase.

Hydrolase; Slycosidase.

510 AA; 57571 MW; BCE638E4DBC2A074 CRC64;
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01-AUG-1998 (TrEMBLrel. 08, Last annotation update)
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ARFI (EC 3.2.1.55) (ALPHA-L-ARABINOFURANOSIDASE) (ARABINOSIDASE).
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  54
 (TrEMBLrel.
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  ထ
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75.0%;
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 01,
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10

O9v2hO pyrococcus
O73907 gallus gall
O35126 mus musculu
P70200 mus musculu
O99621 homo sapien
O91hh3 arabidopsis
O9ydn2 aeropyrum p
O99d12 chlamydia p

pyrococcus

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Q96647;
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Q96847;
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  STRAIN-CV. LONGUM; TISSUE-ABSCISSION ZONE;
Trainotti L., Ferrarese L., Casadoro G.;
Submitted (APR-1996) to the EMBLYGENBARK/DDBJ databases.
-!- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF 1,4-BETA-D-GLU
LINKAGES IN CELLULOSE.
  NON_TER
   u-OCT-2000 (TremBLrel. 15, Last annotation update)
CELLULASE (EC 3.2.1.4) (ENDOGLUCANASE) (ENDO-1,4-BETA-GLUCANASE)
(CARBOXYMETHYL CELLULASE) (FRAGMENT).
CCX3:
   EMBL; X97189; CAA65827.1; --
HSSP; P26221; 1TF4.
MENDEL; 7582; Cappan;1057;7582.
INTERPRO; IPRO01701; --
INTERPRO; IPRO01701; --
INTERPRO; IPRO01759; G1yco_hydro_9;
   Eukaryota; Viridiplantae; Embryc
Magnoliophyta; eudicotyledons; c
Solanales; Solanaceae; Capsicum.
NCBI_TaxID=4072;
   Capsicum annuum (Bell pepper).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spe:
Magnoliophyta; eudicotyledons; core eudicots; Asteridae;
Solanales; Solanaceae; Capsicum.
  Q96547
   SEQUENCE FROM N.A. SEQUENCE FROM N.A.
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  plants.";
Plant Mol. Biol. 29:735-747(1995)
   Capsicum annuum (Bell pepper).
   Hydrolase; Glycosidase.
   Rascio N., Casadoro G.;
   Ferrarese L., Trainotti L., Moretto
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  Differential ethylene-inducible expression of cellulase
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  1 GGLLVQPG 8
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255 GGLIVKPG 262
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   L; 7579; Capan;1057;7579.
PRO; IPRO01701; -.
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   X83711; CAA58686.1; -. P26221; 1TF4.
   00759; Glyco_hydro_9; 1.
PS00698; GLYCOSYL_HYDROL_F9_2; UNKNOWN_1
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485 AA; 53631 MW;
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  OF 1,4-BETA-D-GLUCOSIDIC
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Brummell D.A., Lashbrook C.C., Bennett A. Am. Chem. Soc. Symp. Ser. 566:100-129(199: -:- CATALYTIC ACTIVITY: ENDOHYDROLYSIS OF LINKAGES IN CELLULOSE.
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01-OCT-2000
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MEDLINE-95086382; PubMed-7994180;

Lashbrook C.C., Gonzalez-Bosch C., Bennett A.B.;

"Two divergent endo-beta-1,4-glucanase genes exhibit overlapping

expression in ripening fruit and abscising flowers.";

Plant Cell 6:1485-1493(1994).
  01-NOV-1996 (TREMBLrel. 01, Created)
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Eukaryota; Viridiplantae; Embryo
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   802; Lyces;1057;8802.
IPR001701; -.
   489
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  PRELIMINARY;
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   MBLrel. 13, Created)
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3 PROTEIN (FRAGMENT).
  Glycosidase
  Chordata;
Rodentia;
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  85
75
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129(1994).
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49;
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01-COT-2000 (TrEMBLrel. 15, Last annotation update)
IMUNOGLOBULIN HEAVY CHAIN (FRAGMENT).
  "Serum prolactin-binding protein (PRL-BP) of human identified as IgG."; C. R. Acad. Sci. III, Sci. Vie 317:293-298(1994). HSSP; P01789; IMCP.
SEQUENCE 15 AA; 1469 MW; 35ED2512FF3FA369 CRC64
  "Human VH gene sequence.";
Submitted (NOV-1999) to the
EMBL; AB035268: BAA87067.1;
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MEDLINE-20150255; PubMed-10684935;
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MEDLINE-98277139; PubMed-9614934;

Wu X., Liu B., Van der Merwe P.L.,

Young D.C.;
  01-MAY-2000 (TrEMBLrel. 13, Created)
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01-CCT-2000 (TrEMBLrel. 15, Last annotation update)
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01-OCT-2000
   MEDLINE-98344137; PubMed-9679194;
Kawarabayasi Y., Sawada M., Horikawa H., Haikawa Y., Hino Y., Yamamoto S., Sekine M., Baba S.-I., Kosugi H., Hosoyama A., N Sakai M., Ogura K., Otsuka R., Nakazawa H., Takamiya M., Ohfu Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., O Aoki K.-I., Yoshizawa T., Nakamura Y., Robb F.T., Horikoshi K. Masuchi Y., Shizuya H., Kikachi H.; Masuchi Y., Shizuya H., Kikachi H.; Masuchi Y., Saizuya H., Kikachi H.; Thermophilic archaebacterium, Pyrococcus horikoshii OT3."; DNA Res. 5555-76(1998).
  Read T.D., Brunham R., Shen C., Gill S.R., Heidelberg J.F., White Hickey E.K., Peterson J., Umayam L.A., Utterback T., Berry K., Bass S., Linher K., Weldman J., Khouri H., Craven B., Bowman C., Dodson R., Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty G., Salzberg S.L., Eisen J., Eraser C.M.; Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
  White O., Hickey E.K., Peterson J., Utterback T., Be Linher K., Weldman J., Khouri H., Craven B., Bowman Gwinn M., Nelson W., DeBoy R., Kolonay J., McClarty Eisen J., Fraser C.M.;
   01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TREMBLrel. 07, Last sequence update)
01-CCT-2000 (TrEMBLrel. 15, Last annotation updat
HYPOTHETICAL 28.7 KDA PROTEIN PH0260.
  INTERPRO; IPRO02876; -. PFAM; PF01709; DUF28; 1. Hypothetical protein. SEQUENCE 238 AA; 26486 MW;
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  "Pyrococcus abyssi genome seque
structure and evolution.";
Submitted (JUL-1999) to the EMB
EMBL; AJZ48283; CAB49028.1; -.
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SEQUENCE 272 AA; 30372 MW;
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01-JUN-2000
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SEQUENCE 323 AA; 36034 MW;
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-!- SUBCELLULAR LOCATION: NU
EMBL; X97667; CAA66257.1; -.
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   MEDLINE-96391182; PubMed-8798155;
Buchberger A., Pabst O., Brandt T., Seidl K., Arnold H.H.;
Buchberger A. Pabst O., Brandt T., Seidl K., Arnold H.H.;
"Chick NKx-2.3 represents a novel family member of vertebrate
homologues to the Drosophila homeobox gene tinman: differential
expression of cNKx-2.3 and cNKx-2.5 during heart and gut
  Gallus gallus (Chicken).
Gallus gallus (Chicken).
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   Muzny D., Ansari-Lari M.A., Timms K.M., Yu W., Dugan S., Lu J.,
Shen Y., Rowland K., Liu W., Perez L., Ding Y., Haywood M., Jain A.,
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Forcum J., Arenson A.D., Chiu M.W., Gorrell J.H., Brundage E., Di W.,
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Genomics 40:205-207(1997).
EMBL; D87744; BAA13450.1;
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Oyake M., Onodera O., Shiroishi T., Takano H.,
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Ansari-Lari M.A., Oeltjen J.C., Schwartz S., Zhang
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Gibbs R.A.;
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   Malley T., Gibbs R.A.;
"A gene-rich cluster between the CD4
genes at human chromosome 12p13.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Score 39; DB<br>Pred. No. 0.2<br>1; Mismatches | JALLY PRICAL MITCAL MIT | US-08-466-710C-1 US-08-468-739C-1 US-07-988-925-7 US-08-19-9308-7 US-08-162-102-38-7 US-08-162-102-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8;                                             | PURE ZONULIN, MODULATOR OF T JUNCTIONS T JUNCTIONS MACPEAK & SEAS, N.W., Suite Version #1.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10C-119<br>39C-119<br>25-7<br>26-75<br>30B-75<br>30B-75<br>30B-75<br>39-17<br>83A-92<br>39-17<br>55-36<br>512-31<br>112-21<br>112-21<br>113-21<br>114-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21<br>115-21 |
| Length 20;<br>; Indels                         | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2000 000 000 000 000 000 000 000 000 00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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| 0;                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | sequence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Gaps                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 119, App 119, App 17, Appli 7, Appli 75, Appli 77, Appli 77, Appli 77, Appli 78, Appli 170, Appli 171, Appli 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 0;                                             | •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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Query Match
Best Local Similarity
Trahes 7; Conserve
   В
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   US-08-428-197-38
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JS-08-545-809A-108
  Sequence 38, App...
Sequence 38, App...
No. 5891438
   Sequence 108, Application US/08545809A Patent No. 6096878
   -08-545-809A-108
   APPLICATION NUMBER: US/08/:
FILING DATE: 27-MAR-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP:
FILING DATE: 10-MAY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Freeman, John W.
REGISTRATION NUMBER: 29.06
   GENERAL INFORMATION:
   GENERAL INFORMATION:
  NFORMATION FOR SEQ ID NO:
   REGISTRATION NUMBER: 29,066
REFERENCE/DOCKET NUMBER: 06501/004001
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
   OPERATING SYSTEM: Windows95
SOFTWARE: FastSEQ for Windows Version
CURRENT APPLICATION DATA:
   TITLE OF INVENTION: METHOD FOR STIMULATING PRODUCTION OF INTENTION: VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH TITLE OF INVENTION: VACUATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES TITLE OF INVENTION: THEREOF
  COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
  CORRESPONDENCE ADDRESS:
ADDRESSEE: Fish & Richardson, P.C.
  CORRESPONDENCE ADDRESS:
  SEQUENCE CHARACTERISTICS:
   TITLE OF INVENTION:
  APPLICANT: Honjo, Tasuku
APPLICANT: Matsuda, Fumihiko
   NUMBER OF SEQUENCES:
   APPLICANT:
   NUMBER OF SEQUENCES:
  TELLEFAX: UL. 200154
  TELEPHONE: 01, 28906
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  COUNTRY:
  CITY: Boston
  STREET:
COUNTRY:
   1 GGLLVQPG 8
  CENGTH:
  ADDRESSEE:
   GGALVQPG 34
   02110-2804
              Los Angeles
: California
   amino acid
   ΜĀ
   Application US/08428197
  225 Franklin Street
  E: Spensley Horn Jubas & Lubitz
1880 Century Park East - Suite 500
  118 amino acids
  S
   SILVERMAN, GREGG J.
   Conservative
  IBM Compatible
   HUMAN IMMUNOGLOBULIN VH GENE
SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME
   88.1%;
   145
  PCT/JP93/00603
  US/08/545,809A
  108:
   0;
  Score 37;
Pred. No.
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   Length 118;
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   PCT-US93-10555-38
  Sequence 38, Application PC/TUS9310555
GENERAL INFORMATION:
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Best Local Similarity
Matches 7; Conserv
   TELEFAX: (619) 455-5110 INFORMATION FOR SEQ ID NO: 3
  APPLICANT: SILVERMAN TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INVENTION:
TELEFAX: (619) 455-5110 (NFORMATION FOR SEQ ID NO:
   NAME: Howells, Stacy L.
REGISTRATION NUMBER: 34,842
REFERENCE/DOCKET NUMBER: FD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 455-5100
   APPLICATION NUMBER: PCT/US93/10555 FILING DATE: 29-OCT-1993 ATTORNEY/AGENT INFORMATION:
  CLASSIFICATION:
PRIOR APPLICATION NUMBER:
   CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC'
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 1880 Century Park East - Suite 500
   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
  REFERENCE/DOCKET NUMBER: FI
   ATTORNEY/AGENT INFORMATION:
NAME: Howells, Stacy L.
REGISTRATION NUMBER: 34,
   COMPUTER READABLE FORM:
  SEQUENCE CHARACTERISTICS
   COMPUTER READABLE FORM:
   NUMBER OF SEQUENCES:
  STREET: 1880 Centu
CITY: Los Angeles
STATE: California
  LENGTH:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
  COUNTRY: U
   FILING DATE: 2:
CLASSIFICATION:
  SOFTWARE:
  MEDIUM TYPE: Floppy disk
  FILING DATE:
                                 TELEPHONE:
  TOPOLOGY:
  APPLICATION NUMBER:
  8 GGTLVQPG 15
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   amino acid
  123 amino acids
  USA
   SILVERMAN, GREGG J.
   Conservative
  PatentIn Release #1.0, Version #1.25
                                   619) 455-5100
   protein
  29-OCT-1993
   METHOD FOR STIMULATING PRODUCTION OF VARIABLE REGION GENE FAMILY RESTRICTED ANTIBODIES THROUGH
  88.1%;
  THEREOF
  VACCINATION WITH A B-CELL SUPERANTIGEN AND CONJUGATES
   PCT/US93/10555
  US/08/428,197
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Pred. No.
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   Gaps
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LENGTH:

123 amino acids

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RESULT 6
US-08-434-702-4
; Sequence 4, Application US/08434702
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   ; TOPOLOGY: linear; MOLECULE TYPE: protein US-08-545-809A-125
   ; TOPOLOGY: linear; MOLECULE TYPE: protein PCT-US93-10555-38
  US-08-545-809A-125
  OPERATING SYSTEM: Windows 95
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/5/7
FILING DATE: 27-M**
   Matches
   Query Match
  sequence 125, Application US/08545809A Patent No. 6096878
   Best Local Similarity 87.1
Matches 7; Conservative
   Query Match
  GENERAL INFORMATION:

APPLICANT: Honjo, Tasuku

APPLICANT: Matsuda, Fumihiko

APPLICANT: Matsuda, Fumihiko

TITLE OF INVENTION: BEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME

TITLE OF INVENTION: SEGMENTS AND DNA FRAGMENTS CONTAINING THE SAME

NUMBER OF SEQUENCES: 145

CORRESPONDENCE ADDRESS:

ADDRESSEE: Fish & Richardson, P.C.
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/JP
FILING DATE: 10 -MAY-1993
ATTORNEY/AGENT INFORMATION:
NAME: Freeman, John W.
REGISTRATION NUMBER: 29,06
REFERENCE/DOCKET NUMBER: 0
  INFORMATION FOR SEQ ID NO:
  SEQUENCE CHARACTERISTICS:
LENGTH: 118 amino acids
   TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-542-5070
TELEFAX: 617-542-8906
   COUNTRY: US
ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
   TELEFAX: 200154
   27
   Local Similarity
les 6; Conserv
   CITY: Boston
   STREET:
   1 GGLLVQPG B
   1 GGLLVQPG 8
   GGVVVQPG 34
  GGTLVQPG 15
   amino acid
   ¥
   amino acid
   225 Franklin Street
   Conservative
   UMBER: PCT/JP93/00603
10-MAY-1993
  85.7%;
75.0%;
  88.1%;
87.5%;
   29,066
   0
  06501/004001
   Score 36; DB Pred. No. 6.1;
   Score 37; DB Pred. No. 4.2;
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RESULT 7
US-08-475-000-16
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   Ş
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   Sequence 16, Application US/08475000 Patent No. 5811267
  GENERAL INFORMATION:
APPLICANT: RING, DAVID B.
   atent No.
  TELEFAX: (415) 543-50 INFORMATION FOR SEQ ID NO:
  APPLICATION NUMBER: US 0 FILING DATE: 07-JUL-1994 PRIOR APPLICATION DATA:
                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: CHIRON CORPORATION
   TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
  SEQUENCE CHARACTERISTICS:
   FILING DATE: 20-APR-1990 ATTORNEY/AGENT INFORMATION:
   APPLICATION NUMBER: US 07/687,466
FILING DATE: 18-APR-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/511,417
   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 04-MAY-19
   CORRESPONDENCE ADDRESS:
  TOPOLOGY: 11
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  TELECOMMUNICATION INFORMATION:
  PRIOR APPLICATION DATA:
   COMPUTER READABLE FORM:
  TITLE OF INVENTION:
   NUMBER OF SEQUENCES:
  APPLICANT: Lashbrook, Coral
  327 GGLIVKPG 334
  TYPE: amino acids
  NAME: Bastian, Kevin L. REGISTRATION NUMBER: 34, REFERENCE/DOCKET NUMBER:
   COMPUTER: IBM PC
OPERATING SYSTEM:
SOFTWARE: Patent
   COUNTRY: USA
ZIP: 94105-1492
                 STREET:
   CLASSIFICATION:
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   TELEPHONE:
  ADDRESSEE:
   INFORMATION:
   San Francisco
Emeryville
   California
   E: Townsend and Townsend and Crew One Market Plaza, Steuart Street Tower
                   INTELLECTUAL PROPERTY
   (415)
   Conservative
  Bennett, Alan B.
Fischer, Robert L.
   PatentIn Release #1.0, Version
   E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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   (415) 543-9600
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04-MAY-1995
  UMBER: US 07/511,417
20-APR-1990
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75.0%;
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Pred. No.
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COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk

COUNTRY: USA ZIP: 94662-8097

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

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Best Local Similarity
   GENERAL INFORMATION:
APPLICANT: RING, DAVID B.
  TELEFAX: (510) 655-3542 (NFORMATION FOR SEQ ID NO: 16:
   TELEFAX: (510) 655-3542
NFORMATION FOR SEQ ID NO:
   SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION UNMER: US/08/483,199
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SAVEREDIE, PAUL
REGISTRATION NUMBER: 36,914
   APPLICANT: RING, DAVID B.
TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY
TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
18
  SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acids
TYPE: amino acid
   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
  NUMBER OF SEQUENCES: 18
CORRESPONDENCE ADDRESS:
ADDRESSEE: CHIRON CORPORATION
STREET: INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
   CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
   SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
             SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid
   TELECOMMUNICATION INFORMATION:
   REFERENCE/DOCKET NUMBER: 0850.009
TELECOMMUNICATION INFORMATION:
  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
   TOPOLOGY:
   NAME: SAVEREIDE, PAUL REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
  APPLICATION NUMBER: US/01 FILING DATE: 07-JUN-1995
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  8 GGVLVRPG 15
   RY: USA
94662-8097
   Emeryville
amino acid
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   (510) 601-2585
  (510) 601-2585
  83.3%;
75.0%;
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US-08-331-398A-66
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   RESULT 9
US-08-484-508-16
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  ğ
  ; MOLECULE TYPE: protein US-08-483-199-16
   ; MOLECULE TYPE: protein US-08-484-508-16
   Sequence 66, Application US/08331398A Patent No. 5608039
  Sequence 16, Application US/08484508 Patent No. 5948647 GENERAL INFORMATION:
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  GENERAL INFORMATION:
  TELEFAX: (510) 655-35.
INFORMATION FOR SEQ ID NO:
   ATTORNEY/AGENT INFORMATION:
NAME: SAVEREIDE, PAUL
REGISTRATION NUMBER: 36,
   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,508
   APPLICANT:
  SEQUENCE CHARACTERISTICS:
  TELECOMMUNICATION INFORMATION: TELEPHONE: (510) 601-585
   COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
  CORRESPONDENCE ADDRESS
  TITLE OF INVENTION: ANTIGEN-BINDING SITES OF ANTIBODY TITLE OF INVENTION: MOLECULES SPECIFIC FOR CANCER ANTIGENS
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APPLICANT:
                             APPLICANT:
   NUMBER OF SEQUENCES:
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   Local Similarity hes 6; Conserv
   FILING DATE: 07-JUN-1995
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   1 GGLLVQPG 8
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   amino acid
  CA
  E: CHIRON CORPORATION
INTELLECTUAL PROPERTY - R440, P.O. BOX 8097
  119 amino acids
  (510) 655-3542
  USA
                             FitzGerald, David
   Willingham,
   Pastan,
  Conservative
   Conservative
          Brinkmann, Ulrich
   DAVID B.
   83.3%;
  83.38;
   Mark
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  0850.008
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Pred. No. 9.4;
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  Gaps
   Gaps
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밁
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  US-08-652-558-42
  Patent No. 5861155
Patent No. 5861155
PENERAL INFORMATION:
   Sequence 42, Application US/08652558 Patent No. 5861155
   Matches
  Query Match
   TELEPHONE: (415) 543-9600
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 66
SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 12-0CT-1990
   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inch disket
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
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REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy disk
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  NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
  TITLE OF INVENTION:
   MOLECULE TYPE: peptide
   CURRENT APPLICATION DATA:
  APPLICANT:
   ATTORNEY/AGENT INFORMATION:
  STREET: One ....
CITY: San Francisco
CITY: Tallfornia
   APPLICATION NUMBER: US 0 FILING DATE: 30-SEP-1991
  APPLICATION NUMBER: US/O FILING DATE: 28-OCT-1994
   SOFTWARE:
  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
  CITY:
   STREET:
  Local
  STRANDEDNESS
   COUNTRY:
   ADDRESSEE:
  · 1 GGLLVQPG 8
   TOPOLOGY:
  ADDRESSEE:
  GGGLVQPG 15
   02109
  94105-1492
   Similarity
7; Conser
   BOSTON
  amino acid
   MASSACHUSETTS
   Hunter,
   E: Townsend and Townsend and Crew One Market Plaza
   USA
   75 STATE STREET, 231
   Conservative
  LIN,
   PatentIn Release #1.0, Version #1.30
   linear
   AUGUSTINE YEE-THARN
ON: HUMANIZED ANTIBO
  inch diskette,
  THEREOF
   and
  81.0%;
87.5%;
          PC-DOS/MS-DOS
  Single Chain B3 Antibody Fusion Proteins and Their Uses (as amended)
  US 07/596,289
   US/08/331,398A
   66:
   015280-126110US
   23RD FLOOR
   0;
   Score 34; Pred. No.
   ANTIBODIES AND USES
   Mismatches
  1.4 Mb storage
   DB 1;
   Length 15;
   1;
   Indels
   0;
   Gaps
   0;
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```
Query Match
Best Local Similarity
Tatches 7; Conserve
   RESULT 12
US-08-331-397B-66
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  Ş
  ; MOLECULE TYPE: US-08-652-558-42
  Sequence 66, Application US/08331397B Patent No. 5981726
   GENERAL INFORMATION:
  TELEFAX: 617-345-9111
INFORMATION FOR SEQ ID NO:
   REFERENCE/DOCKET NUMBER: 95
TELECOMMUNICATION INFORMATION:
                           REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
   APPLICATION NUMBER: US 07 FILING DATE: 30-SEP-1991 PRIOR APPLICATION DATA:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
   CURRENT APPLICATION DATA: US
  FILING DATE: NOVEMBER 21, 1994 ATTORNEY/AGENT INFORMATION:
   ATTORNEY/AGENT INFORMATION:
NAME: Hunter, Tom
   CORRESPONDENCE ADDRESS:
   NUMBER OF SEQUENCES:
  TITLE OF INVENTION:
TITLE OF INVENTION:
   APPLICANT:
  SEQUENCE CHARACTERISTICS
   PRIOR APPLICATION DATA:
  TYPE: amino acid
STRANDEDNESS: sir
   NAME: Hunter, Tom
REGISTRATION NUMBER: .38,498
  APPLICATION NUMBER: FILING DATE: JUNE 6,
  FILING DATE:
   APPLICATION NUMBER:
   FILING DATE:
  OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
  COUNTRY: USA
ZIP: 94105-1492
   STREET:
   ADDRESSEE:
   TOPOLOGY:
  TELEPHONE:
   REGISTRATION NUMBER:
  APPLICATION NUMBER:
   8 GGGLVQPG 15
   1 GGLLVQPG 8
   ENGTH:
  San Francisco
  YANKWICH, LEON R.
  California
  E: Townsend and Townsend and Crew
One Market Plaza, Steuart Street Plaza
  15 amino acids
   617-345-9111
                (415)
   Benhar,
  Conservative
  Pastan,
   linear
   617-345-9100
15) 543-5043
SEQ ID NO:
  protein
   28-OCT-1994
   JMBER: US 07/596,289
12-OCT-1990
   single
   Itai
   81.0%;
87.5%;
   Chimeric and Mutationally Stabilized Tumor-
Specific Antibody Fragments, Fusion Protein
  Thereof
   30,237
30,237
ARER: 95,497-L
   US 07/767,331
  PCT/IB94/00387
  US/08/331,397B
  US/08/652,558
, 1996
  015280-126120US
  0;
   Score 34;
Pred. No. 1
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  2
  Length 15
  Indels
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  Gaps
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Uses

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Best Local Similarity
Matches 7; Conserv
   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATELULE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/759,804A
FILING DATE: 03-DEC-1996
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
  GENERAL INFORMATION:
  TELEFAX: (415) 576-0300 NFORMATION FOR SEQ ID NO: (
   SEQUENCE CHARACTERISTICS:
  TELEPHONE: (415) 576-0200
   ATTORNEY/AGENT INFORMATION:
  FILING DATE: 30-SEP-PRIOR APPLICATION DATA:
   APPLICATION NUMBER: US 08/331,398
FILING DATE: 28-CCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
   APPLICANT: Pai, Lee
TITLE OF INVENTION: Tumor-Specific Antibody Fragments,
TITLE OF INVENTION: Fugion Proteins, and Uses Thereof
   CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew LLP
STREET: Two Embarcadero Center, Eighth Floor
  MOLECULE TYPE: peptide
  APPLICANT: Willingham, Mark
APPLICANT: FitzGerald, David J.
APPLICANT: Brinkmann, Ulrich
  MOLECULE TYPE:
  NUMBER OF SEQUENCES:
  NAME: Weber, Ellen L.
REGISTRATION NUMBER: 32,762
REGISTRATION NUMBER: 015280-126140US
  TOPOLOGY:
  STREET: TWO EMBALLANCE CITY: San Francisco
  STRANDEDNESS:
  APPLICATION NUMBER: US 07/596,289 FILING DATE: 12-OCT-1990
  TOPOLOGY:
  COUNTRY:
  STRANDEDNESS:
  ENGTH:
  1 GGLLVQPG 8
  LENGTH:
   No.
   8 GGGLVQPG 15
   i: 15 amino
amino acid
   amino acid
   California
  15 amino acids
  USA
  Brinkmann, Ulrich
   Conservative
  linear
  acids
  81.0%;
87.5%;
  Score 34; I
Pred. No. 1
   Mismatches
  DB
1.7
   ۷,
  Length 15;
   Indels
   0;
   0
                                RESULT 15
US-08-401-908-14
  밁
   망
   Š
   RESULT
Sequence 14, Application US/08401908 Patent No. 5684146
  Matches
  Patent No.
```

Query Match

81.0%;

Score 34;

DВ

2

Length 15;

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; TOPOLOGY: 11; MOLECULE TYPE: US-08-331-398A-55
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Best Local Similarity
   Sequence 55,
  Best Local Similarity 87.9
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   TELEPHONE: (415) 543-9600
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 55:
SEQUENCE CHARACTERISTICS:
  GENERAL INFORMATION:
   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: DESCRIPTION PC-DOS/MS-DOS
COMPUTER: DESCRIPTION PC-DOS/MS-DOS
   APPLICATION NUMBER: US 07/767,331
FILING DATE: 30-SEP-1991
PRIOR APPLICATION DATA:
APPLICATION UNBER: US 07/596,289
FILING DATE: 12-OCT-1990
ATTORNEY/AGENT INFORMATION:
   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION UMBER: US/08/331,398A FILING DATE: 28-OCT-1994
   REFERENCE/DOCKET NUMBER: 01
TELECOMMUNICATION INFORMATION:
  CLASSIFICATION: 435
PRIOR APPLICATION DATA:
  CORRESPONDENCE ADDRESS:
   TITLE OF INVENTION: Single Chain B3 Antibody Fusion Proteins TITLE OF INVENTION: and Their Uses (as amended)
  APPLICANT:
  NUMBER OF SEQUENCES:
   STREET: One Market | CITY: San Francisco
  STRANDEDNESS
   COUNTRY: USA
  REGISTRATION NUMBER:
                                    1 GGLLVQPG 8
  LENGTH:
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8 GGGLVQPG 15
  8 GGGLVQPG 15
   1 GGLLVQPG 8
   94105-1492
  amino acid
  California
   Application US/08331398A
   E: Townsend and Townsend and Crew
One Market Plaza, Steuart Street Plaza
  18 amino acids
   Conservative
   Willingham, Mark
FitzGerald, Davi
  Brinkmann, Ulrich
   linear
  peptide
  81.0%;
87.5%;
  87.5%;
  38,498
   David
  015280-126110us
   0
  Score 34; I
Pred. No. 2
  Pred. No. 1.7;
   Mismatches
   Mismatches
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  ۲,
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  Indels
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  0,
   Gaps
  Gaps
   0
  0
```

```
GENERAL INFORMATION:

APPLICANT: YOSHINODU OKUNO et al.

APPLICANT: YOSHINODU OKUNO et al.

TITLE OF INVENTION: A DNA WHICH CODES FOR THE VARIABLE REGION OF

TITLE OF INVENTION: ANTIBODY

NUMBER OF SEQUENCES: 36

CORRESPONDENCE ADDRESS:

ADDRESSEE: Wenderoth, Lind & Ponack

STREET: 805 Fifteenth Street, N.W., #700

CITY: Washington

STAYE: D.C.

COMPUTER BADABLE FORM:

MEDIUM TYPE: Disketth; 3.5 inch, 1.44 mb
   ; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; ORIGINAL SOURCE: heavy chain of C179
US-08-401-908-14
   밁
   ş
Search completed: June 13, 2001, 14:16:37 Job time: 498 sec
   Query Match 81.0
Best Local Similarity 87.5
Matches 7; Conservative
   COMPUTER: IBM COMPORTIBLE

OPERATING SYSTEM: MS-DOS

SOFTWARE: WORDPERCT 5.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/401,908

FILING DATE: MARCH 10, 1995

CLASSIFICATION DATA:

APPLICATION NUMBER:

FILING DATE:

TELEOMMUNICATION INFORMATION:

TELEPHONE: 202-371-8850

TELEPHONE: 202-371-8850
   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 18
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8 GGGLVQPG 15
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87.5%; Pred. No. 2.1;
tive 0; Mismatches
   14:
  1; Indels
  Length 18;
  0;
   Gaps
  0,
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